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COLMAN'S RURAL WORLD,

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AGRICULTURAL, HORTICULTURAL AND STOCK  
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ROTATION OF CROPS.

A rotation of crops must be based upon ex-  
perience. Science is not yet far enough ad-  
vanced to benefit us much here. The various crops  
grown in succession, and in different order,  
must be our guide. This also is a safe guide.  
It will not do to trust to books here, or any  
man's particular mode of rotation, when the  
experiment is to be made in different localities.  
Each locality, or each soil and its climate,  
must have its own tests; and those tests  
which are proved to be the best must be adopt-  
ed. This is our only course.

All agree that the soil must be generally  
rich for any crop; and the richer it is, the bet-  
ter for most crops, as all the elements are sup-  
posed to be there, and the plant has but to se-  
lect, leaving what it does not want. But it  
generally wants more or less of all the ingredi-  
ents which enter into vegetation. If some prop-  
erties are drawn upon more largely, their  
abundance will still leave a surplus for other

crops of the same plant, so that the same grain  
may be raised for years in succession—thus  
corn, wheat, roots, &c. Hence, a rich soil  
will bear almost any crop—bear it for years.  
But whether another grain would do better af-  
ter the first or second crop—is the question.—  
If the crop is equally saleable—say wheat  
following corn, or corn meadow—there is no  
reason to believe that this crop would be more  
advantageously raised. And this is true be-  
yond any doubt. The experience of the world  
is, a rotation of crops—it is a stereotyped prin-  
ciple in farming. The only difficulty is, the  
application of the proper grain or crop. And,  
as we have said, this must be governed by the  
experience of the locality, by the most suc-  
cessful mode. This, any farmer of observation  
will note. He must note it among his neigh-  
bors, and not in distant localities. These dis-  
tant places may be fruitful in hints, and their  
practice may be of advantage. But the safe  
method is to practice what you know already;  
and experiment, if you have time and means,  
upon what you do not know.

WORKING AND THINKING.

There are a great many working farmers—  
the country is full of them! But is the coun-  
try as full of thinking farmers? We fear not!

Do farmers reflect upon what they hear and  
see and read. Or do they swallow, at one gulp,  
all that is told them—all that they see in the  
papers? Do they sift error from truth, and  
then digest the truth when they see or hear it.

We have judgments. They are the crucibles  
in which the gold should be separated from the  
dross. We must not swallow the *ipse dixit* of  
any man or set of men, without first exercising  
our judgment and asking—Is it truth or error?  
For what have our reflective faculties been giv-  
en us? Why do we neglect to exercise them?  
It is all wrong. Let us change in this respect,  
and we shall daily grow wiser and better.

Farmers should not neglect to give their  
horses proper exercise. Do not suffer the  
horses to stand the whole week in the stable,  
but give, at least, one hour's exercise daily.—  
Give sloppy food at least twice a week, and  
throw a lump of rock salt in the manger.

How to Hold the Fertility of the Soil.

Gypsum attracts. It is not only a manure in  
itself, but it attracts the manure from the at-  
mosphere that comes in contact with it (which  
is abundant in windy days); but it catches  
and holds the fertility of the ground that in  
some soils escapes. Lime will also do this—so  
will clay. Clay, dried and powdered, is an ex-  
cellent thing to put on a barn-yard or to cover  
a compost heap with, or work through the heap  
—hence, we use gypsum and lime in our stables  
and privies. Gypsum is best, it has the  
most attraction, besides other properties. A  
little should be kept by every farmer for use,  
even at a high cost, as the benefit is sometimes  
more important than the high price.

But we waste our manure. We not only  
permit its strength to escape, but we are glad  
to get it out of the way.

The same recklessness extends to the land.  
It is well our soil has a good proportion of clay,  
to hold its strength. We must conserve.—  
The time is not far distant when we shall be  
compelled to do it. Already there are sym-  
ptoms of lack in our soil; we do not raise as  
heavy crops as we used to; here and there a  
field; here and there a farm, is less productive.

It is not so much that we need plaster here  
in the West to hold the strength of the soil, as  
to use it to abstract from the atmosphere, and  
to save the ammonia of our barnyards and  
stables. For this, let us always keep a little  
on hand. Let us save and improve our manure  
—and thus save our farms.

How to RELIEVE CHOKED CATTLE.—A corre-  
spondent of the *Rural American* says: I have  
fattened many cattle on potatoes, and always  
fed them whole, and occasionally one gets  
choked. I then put the animal in a yard, where  
there are bars, which I let down, so that she  
can jump over, but as high as she will jump.  
I then place her about two rods from the bars,  
with her head towards them, and with a good  
whip, well applied, I run her over the bars on the  
jump, and when she touches the ground, on the  
opposite side, the potato will fly out of her  
mouth. I have informed my neighbors of this  
remedy, many of whom have tried it, and in no  
case have I known a failure.

## FEEDING COWS.

We have already mentioned the importance of proper pastures in the production of cheese. The pastures of New York are usually hillsides, the more aged—i. e., the longer seeded the better. There should be no mixture of weeds among the pasture; naught but the sweet tender grasses. In seeding for pasture, seed liberally, make a full, firm, thick sward as quickly as possible. There is no economy in light seeding, especially if pasture is wanted. A close, fine sward will produce more grass and less weeds than a thinly seeded field, with bare patches of earth inviting the growth of noxious weeds and requiring years for full swarding. Then again the quality of the grass is much better on a clean, thickly swarded pasture for butter and cheese making, than herbage of ranker, coarser growth. Some of the land owners in the best dairy sections of England, provide in the lease that certain old pasture lands shall remain unplowed, &c. New York farmers are coming to look upon old pastures in their true value.

Another item in feeding cows for milk is, to make provision for extra feeding during seasons of drought. For this purpose red clover is one of the best crops grown—corn sowed thickly is good. One of these should always be provided, that cows may have a good feeding at night. Red clover has the preference in this State for this purpose, and where liberally manured has produced frequently four cuttings in a season.

By feeding as above mentioned, the yield of milk is greatly increased and proportionately the profits; and allow me here to say that the farmer making dairying a business, should make it no "second fiddle" experiment—it won't pay him. Give it close attention—push it you like, but do not neglect it, or you will come to the inevitable conclusion that cows don't pay. The facts are that "unkept" cows do not pay—but cows going to pasture in good order in the spring, will give a large return in milk during summer, if properly supplied with good milk producing food. The cow must have a juicy, hearty diet, for a liberal flow of milk. Milk cometh not from grazing on frost-bitten, prairie grass.

The wintering of cows is an item deserving the fullest attention. They must be well wintered to produce well in milk. The poor cow turned to grass divides her energies between producing milk and recruiting her physical nature, and remains poor through the season. The cow in good flesh gives a full yield from the first full feed of grass and continues it until her season is over; coming from pasture in good condition for winter.

Dairy farmers in the best dairy regions of New York, give their cows as careful attention as the best horse-keepers afford their horses. They are stabled all winter, day and night, generally only leaving their stables for a supply of water. Their food is liberal in supply, and nutritious in quality. The result with cows thus kept, is a full yield from their full strength when summer comes. The hope of obtaining a full yield of butter-bearing milk, from cows whose flesh and vitality have been consumed by the rigor of winter is, to say the least, sure of disappointment. It will be borne in mind that a full yield of butter should be 200 pounds per cow, and 400 of cheese. The quality of the cow and her keeping are mainly productive in bringing such results. Do not rest satisfied with half a yield because your cows are natives. The best yields thus far, have been obtained from cows of common parentage. We leave this part of the subject to the discussion of those interested, laying down the above, as axioms on which the farmer may base his expectations without fear of disappointment. Good keeping, summer and winter, is necessary to productive and profitable dairying.—[Iowa Homestead.]

## THE MISSOURI AGRICULTURAL COLLEGE.

What Missouri will do with her contemplated College of Agriculture and the Mechanic Arts, cannot, as yet, be predicted; although the wisdom of her management of other interests warrants the hope that she will make it one of the Colleges of the State University.

This is the true policy, and will find more and more favor with the intelligent, reflecting and impartial men of the State. In no other part of the world than America, are circumstances so favorable to a full realization of the idea of a true University, consisting of a cluster of colleges devoted to instruction in every branch of human learning, all resting upon the broad basis of equality, of mutual dependence, and intimate association; and in no part of America could there be a greater hope of the early realization of this grand idea than in Missouri. I am happy to say, that in these views I have the cordial concurrence not only of the Governor, the Superintendent of Public Instruction, and the new President of the University (who by the way, seems to have made an excellent impression, and to be universally popular here,)—but likewise of the majority of the disinterested educational men of the State, so far as I have had opportunity to learn their views. Some leading members of the Board of Agriculture entertain other views at present, but will eventually, I think, meet the University on liberal ground.—C. W. Hoyt, Cor. Sec. Wis. Agr. Soc.

## FENCES.

*Laws of Missouri in Relation Thereto.*

Below we give our readers the law upon this matter.

SECTION I. All fields and inclosures shall be inclosed by hedge; or with a fence sufficiently close, composed of posts and rails, posts and palings, posts and planks, palisades, or rails alone laid up in the manner commonly called a worm fence, or of turf with ditches on each side.

§ 2. All hedges shall be at least five feet high; and all fences composed of posts and rails, posts and palings, posts and planks or palisades, shall be at least four and a half feet high; those composed of turf shall be at least four feet high, and trenches on either side at least three feet wide at the top and three feet deep; and what is commonly called a worm fence shall be at least five feet high to the top of the rider, or, if not ridered, shall be five feet to the top rail, and the corners shall be locked with strong rails, polls or stakes.

§ 3. In all cases the sufficiency of a worm fence shall be determined by the persons who may be summoned to view it.

§ 4. If any horse, cattle, or other stock shall break into any inclosure (the hedge or fence being of the height and sufficiency aforesaid); or if any hog, sheep or pig, shall break into the same—the owner of such animal shall, for the first trespass, make reparation to the party injured for the true value of the damages he shall sustain; and, for every trespass thereafter, double damages, to be recovered with costs before a Justice of the Peace, or in any Court

of Record having cognizance of the sum demanded by the party injured; for the third offence from any of the animals aforesaid breaking into such inclosure, the party injured may kill the beasts so trespassing without being answerable for the same.

§ 5. Upon the complaint of the party injured, to any Justice of the Peace of any township, such Justice shall issue his order without delay, to three disinterested householders of the neighborhood, in no way related to the party injured or person owning the stock, reciting the complaint and requiring them to view the hedge or fence where the trespass is complained of, and take memoranda of the same; and their testimony in such case shall be evidence on the trial touching lawfulness of the offence.

§ 6. If any person damaged for want of such sufficient hedge or fence, shall hurt, wound, lame, kill, or destroy, or cause the same to be done, by shooting, worrying with dogs or otherwise, any of the animals in this chapter mentioned, such persons shall satisfy the owner of such animals in double damages with costs.

§ 7. Nodivision fence, or part of a fence, which the lands of different owners are included, shall be removed without the mutual consent of said owners, unless the party desiring to remove said fence shall first give six months notice in writing, to the owner or owners, his intention to remove the said fence; and after the expiration of the time of said notice, may remove the same.

## BREACHY STOCK AGAIN.

ED. RURAL WORLD: I see that one of your correspondents has called attention to the subject; but he does not go quite far enough.

I am a strong advocate of the fencing plan, instead of fencing out.

Is there any justice in making another let to turn his neighbor's breachy stock. My doctrine is, to let, or, rather, make every man care of his own stock; but we cannot get this man yet—but we can make a beginning. Compel ALL mules to be kept from running at large for they are a public nuisance from the time they are colts until they are old mules; stud colts, bulls, jacks, boars and rams, six months' old running at large, should be declared a public nuisance.

What are we to do with all these nuisances? My plan is: whenever such stock is found running at large, let complaint be made and oath to any Justice of the Peace in the Township, whose duty it shall be to issue his warrant to the township constable to take the stock, advertise, and sell it to the highest bidder, and after paying costs, apply the balance to the school fund. I think this plan will work well, for such stock always will trouble some one, who will be glad to get rid of it in this way.

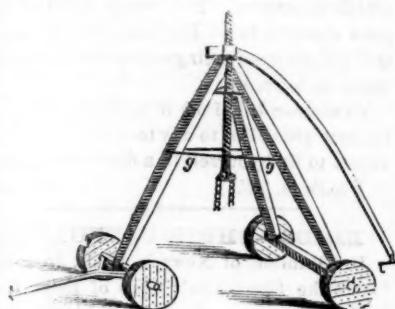
You must also try and get up something for the protection of the Fruit Grower. Have some severe penalty that can be enforced against pilferers and trespassers upon fruit grounds and gardens. I have a number of acquaintances in the House, who I think will assist you in this matter; but I take the liberty of writing to you because I think you will be more apt to take a lively interest in these matters. B. F.

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#### STUMP MACHINE.

We here give a representation of a Screw Stump Machine, illustrated and described some years since, by F. Lucas, of Castile, New York.

The screw is of wrought iron, 10 feet long and 3 inches in diameter, with threads three fourths of an inch apart, square cut. The frame consists of three posts, as seen in the annexed figure, 7 or 8 inches square at the bot-



tom, and 10 or 11 in the middle, joined together at the top, and secured by a strong band of tire-iron. Each post is hollowed at the top before it is put together, to give place for the screw. The bar posts are  $13\frac{1}{2}$  feet apart at the foot and 14 feet long; the forward post is  $14\frac{1}{2}$  feet long, and stands  $14\frac{1}{2}$  feet from the others at the bottom. It is fastened to the forward axle by a strong bolt firmly fastened into the post, and setting into a hole in the axle. The forward axle is usually 3 or four feet between the shoulders; the hind one 14 feet between the shoulders; the braces *gg* are fastened to the back posts, and pass around the front one, too prevent sliding out at the bottom. The wheels are made of four inch white oak plank, doubled and firmly pinned together, making a wheel 8 inches wide. The nut is movable and fastened to the lever by two straps of iron. The screws are cut left hand.

Fig. 2 represents the manner of fastening to the stump. First, dig around one of the main roots, pass the chain under it, and pass a strong chain loosely around the top of the stump to prevent the stump from tipping

Fig. 2. too much while pulling. The large chain is usually of  $1\frac{1}{2}$  inch iron, the small one of  $\frac{3}{4}$  inch iron.

A yoke of oxen and one horse are the team necessary for working one of these machines. With the oxen they are easily moved from one stump to another. It is in every respect superior to any other machine for the purpose. Once made, if made as it should be, it needs no repairs of any amount, and will pull the largest pine stumps with the greatest facility. The screw may be obtained at almost any large iron factory, and any ordinary workman can do the framing.

We would suggest, in using these machines, that blocks be kept at hand and placed under the axle on the line of the posts to relieve the axle from the weight.

It is good discretion not to make too much of any man at the first; because one cannot hold out that proportion.

#### TRAINING TROTTERS.

We will go to the stable, and while you are jogging those you did not work this morning, I will superintend the cleaning and preparation of feed. The horses heretofore having all been fed at the same time, there was not the necessity for it. When the rattling of the sieve was heard, their uneasiness was soon relieved by getting their respective portions. Now, to get along with the driving as we ought to, we will have to postpone the feeding of those that are being exercised near the feeding time, and it is important that their eating does not disturb the others in the stable. With the feed prepared, it can be given without noise. Good, clean, sound oats, one or two years old, weighing from thirty-five to forty pounds the measured bushel, that have been kept in the stack long enough, before threshing, to sweat thoroughly, is the first consideration. We will use a strongly made forty gallon cask, and put in it two bushels of oats, two of the boys, with shovels or spades, striking alternate blows, or rather chopping, till all of the husks are loosened that can be by this operation. When sufficiently chopped, carry to the green, and, spreading a linsey or sheet, let the oats fall slowly from pans elevated as high as the boys can hold them. The breeze that is now exposing the silver lining of the leaves of that beautiful poplar, is just strong enough to blow away all of the dust and light grains, so the portion retained is both heavy and clean. We will now take six quarts of hominy—the proportion will be greater hereafter—and after fanning all of the mealy particles out of it, thoroughly incorporate it with the oats on the linsey. To effect this, the boys take the sheet by the corners, and by tossing it backwards and forwards the union is soon accomplished. The work is continued till the receptacles intended for the reception of this mixed feed are filled. Another is filled with clean oats alone, and still another with prepared hominy. A barrel or two filled with bright ears of corn, and a box of bran complete this part of the commissary. We can then feed a horse whatever we desire without waiting for preparation, and there is no rattling of the sieve to annoy those we do not wish disturbed. The best bran for our purpose is that obtained from winter wheat. The flinty husk enveloping the kernel on that is the thinnest and more easily separated from the flour. There is less nutriment of course than in the bran of spring wheat. Nutriment is not what we want; we will use oatmeal or sago for gruels; the mashers are intended to slightly irritate the inner coating of the stomach and intestines, causing them to secrete more of the watery fluid, thus softening the evacuations.

The feed room must be kept strictly under lock and key, and the boys never suffered to measure the feed. The foreman will give them the amount their horses are to have, and if I had not full confidence in him attending to this part of his duty, I should carry the key myself, even if it necessitated my attendance at the stable for every feed. Grooms becoming attached to the horses they are taking care of, are very apt to feed more than they are told, and this mistaken kindness I have known followed by serious consequences. I will not detain you any longer from driving; by the time you get through, the horses will have to go out for their walk.

We have hardly time now to discuss the effects of the different kinds of grain on the health of the horse. It is a matter I have thought a great deal about, yet I cannot flatter myself that I am capable of throwing much light on the subject. Oats are said to be the natural food of the horse. Why they have been fixed on as their natural aliment is difficult to tell. If the horse originated in the East, as is generally believed, he must have been dieted on something else, as they were not grown there at all. They have

the thickest husk of any of the cereals with which I am acquainted, there being only eight pounds of flour to fourteen of grain, while there are twelve of barley and thirteen of wheat in the same quantity. Corn has still less bran, and if a horse was confined to any one of these grains in a whole state, the greater bulk of oats to their weight might make them easier of digestion. I will give you some of the reasons why I mix them; there is more nutriment in the same bulk, they are easier digested than when fed separately; most horses like the mixture better, and will eat when then they would mince over oats alone; corn being more laxative than oats, has to be used with discretion, and I have known trainers to err in giving it to animals that would have been better without it. Washy, delicate horses, which can hardly take work enough to learn to trot even, without going off their feed, with such a fidgety, nervous organization that any noise or change will discompose them; that scour when they are the least excited; that never need to be sweated under any circumstances—ought never to be fed corn or mashes. All will agree with me that bran ought not to be fed to such; but a majority will say, why, these are the very subjects that ought to have corn; it will increase their strength, being stronger food, and you can often get them to eat an ear or two of corn when they would not touch the oats. They will instance the English practice of feeding beans, universally recommended by their best trainers for those washy, light-waisted fellows; and reason that because beans and corn are of about the same specific gravity, they are analogous in their results. Beans have a constipating tendency, which makes them a proper corrective for the lax constitution, while corn increases the evil.

—[Turf, Field and Farm.]

#### EDUCATING STOCK.

Begin the tuition of your colt as soon as it is born, and continue it, and it will grow up naturally with it; it knows no other way. It would be more difficult in such case to teach it vicious habits, than to break it of them when once formed. Early lessons are the thing for all stock—the human included. Grow into a thing, and it will become nature. Colts and boys will thus be made tractable horses and useful men.

#### SOIL ITS OWN MANURE.

Deep and thorough tillage, running deeper every year, is manuring the land, as it brings the new, strong soil to the surface. If too much is brought up at a time, the frost and sun and the rains may not sufficiently effect it to decompose it, hence it will be an obstruction. Plow in the fall or winter, and bring up enough, so that the elements can thoroughly prepare it, and you have a durable coat of manure. By deep plowing the soil you increase it, and deepen the drainage where there is an inclined pitch.

**WHAT MAKES A BUSHEL.**—The following table of the number of pounds of various articles to a bushel, may be of interest to our readers.

Wheat 60, corn shelled 56, corn on the cob 70, rye 56, oats 30, barley 46, buckwheat 56, Irish potatoes 60, sweet potatoes 50, onions 57, beans 60, bran 20, clover seed 60, Timothy seed 45, hemp seed 45, blue grass seed 14, dried peaches 33.

**POULTRY HOUSES** should be kept clean, and ashes and lime sprinkled over the floor every week. Let the manure be put away in a dry place, and preserved for use on the crops.

**Treatment of Sorghum Syrups.**

The crop of Sorghum having now been all harvested and the sweet extract thereof safely garnered in barrels and casks, the inquiry next arises as to how the surplus shall be disposed of. The best advice we can give to all our readers and friends is—sell your sirups to your neighbors, or at the nearest market town, for a dollar a gallon cash. If you can not get cash, trade it off for farm stock, horses, cattle, hogs, sheep, or any thing you can obtain at a fair value, except dogs and certain kinds of patent rights.

But it may be difficult in some places to dispose of syrup promptly at its real value, and we would be far from advising any person to sell their surplus stock at a sacrifice. Sorghum sirup of fair quality is a staple commodity, and there is no reason for submitting to loss on it, unless the owner is under the necessity of realizing the cash and is thus obliged to make forced sales.

When it is proposed to keep sirup until Spring or Summer, the owner should not neglect the necessary means to secure it from fermentation. He should also put it into the best and most convenient marketable shape, so that it can be exhibited to advantage and readily brought out for delivery when an opportunity for selling arises. Upon these points and others incidental to the treatment of sirups we offer a few remarks:

**TO PREVENT FERMENTATION.**

The most certain means of preventing fermentation is to keep the sirup in a cool place. It may be left out in sheds or out-buildings through the winter, but as soon or before the warm suns of Spring occur, it should be stored in cool cellars. The barrels should be quite full and tightly bunged. Sirups made from immature or from frosted cane are most liable to ferment. Badly defecated cane sirup, or that which has been stored in old, imperfectly cleansed barrels, is liable to ferment. Sirups which have been made without lime or bi-sulphite, are more liable to ferment than those in which these agents, or either of them, have been judiciously used. Other things being equal, thin sirup is more liable to ferment than that which is heavier, though dense sirups often ferment and will always do so, no matter how dense, provided the conditions of temperature and the excitants to fermentation are present.

**RE-BARRELING SIRUP.**

When sirup has been filled into barrels while still warm from the evaporator, a greater or less quantity of sedimentary matter is, after a few weeks, deposited in the bottom of the barrels; at the same time a dirty scum containing numerous specks, often appears and remains upon the surface or upper part of the barrel. It is an excellent plan to draw off the sirup from the barrels and fill into others, leaving the surface scum and the sediment behind. The barrels, as fast as emptied, should be thoroughly cleansed with boiling water before being filled again with the sirup which is being drawn off. It will surprise some to find how much of sediment and absolute dirt appears in the wash-water. The washings of all the barrels can be deposited in a tub or cask and allowed to settle for few hours, and the clear liquor afterwards boiled down to molasses, so that nothing is really lost by the operation—but dirt. It will add very much to the security against fermentation, to pour about a gill of bi-sulphite of lime into each barrel after it has been cleansed with water, and shake it around in the barrel before filling with sirup. If this substance is not at hand the barrel may be fumigated with the fumes of burning sulphur, which will answer the same purpose. There are various modes of managing this. A small tin tubular cup, containing a spoonful or two of sulphur, may be dropped down through the bung-hole and held by a wire, while a red hot poker is being thrust down into the cup to ignite the sulphur; or the

barrel may be supported on tressels, bung down, and a shovel full of live coals, upon which some sulphur has been deposited, held centrally under the bung-hole, so that the fumes as they arise will enter the barrel. A vent hole should be opened to allow the air displaced by the sulphurous gas, to escape. Be careful not to breathe the fumes as they are rather poisonous. If the sulphur is not used, the final rinsing of the barrel should be with lime-water.

In refilling the barrels, fill entirely full and bung tightly, at the same time preserve a sample vial of each barrel, lettered or numbered to correspond with the barrel which it represents. This will obviate the necessity of opening, admitting air and disturbing the contents of the barrels, all of which tends to promote fermentation; or if sample vials are not used, indicate by a letter or number upon each barrel the relative quality or grade of the sirup which it contains.

But it is probable that the suggestions we offer, though they may be regarded as important, will be generally neglected. Other duties will cause this to be postponed from time to time, until the warm suns of spring appear, and about the time the roses begin to burst their petals, sorghum barrels, still remaining stored in sheds, will be found bursting their unavailing hoops and the sirup oozing out through every joint and pore. Then something must be done.

**RE-BOILING SIRUP.**

When sirups begin to ferment, they should be re-handled with as little delay as possible. Simply re-boiling will arrest fermentation and prevent its recurrence for a considerable time; re-boiling, with the addition of an appropriate quantity of lime-water, as indicated by the litmus paper, affords entire security against fermentation, and also improves the taste of the sirup, though it darkens the color. Diluting with one and a half or two parts of water, neutralizing with lime and re-boiling to the original density, is a still more thorough process, as considerable scum is given off in the operation. —[*Sergo Journal*.]

**HORSE BATHING.**—We read, in "*Trall's Herald of Health*," "baths for horses have been so thoroughly tested that their use is becoming quite common. Tattersall, the greatest horse owner in London, who furnishes the best of horses for lords and nobles to drive, and who figures largely at the Derby races, treats his horses to the Turkish bath, and in this way cures them of the very few diseases to which, with the wise hygiene of his stables, they are subject. Drugs find little place where such care is given. We ought to have in New York and all large cities, hygienic establishments for treating horseflesh, and if the new veterinary college will do what it can to favor this idea, they shall have our hearty sympathy. But if it is only the old story over again of the other medical schools—drugging, bleeding, dosing, purging, the fewer we have the better."

Written for Colman's Rural World.

**TO-MORROW.**

The man of business takes time by the forelock; and never thinks another time will do as well for what may be done to-day. To-morrow is the time for the indolent, the careless, and air-castle builders.

A negligent farmer has a poor orchard. The borer, the caterpillar, and other insects infest it—he sees their signs every day. He is as fond of a good apple as any man. "It won't do," says he—"my trees will be ruined; I will take them in hand to-morrow." To-morrow comes! unluckily he has other business to do

that should have been done a month ago. & the destructive insects work on unmolested. His orchard "will do for the present." And in a few years the dry trees will do to cut down for firewood.

The weeds are fast growing up in his garden. "One day," he says, "will make but little difference—I will weed it to-morrow." The weeds are more industrious than he; they don't pull off till to-morrow. Evil weeds and bad habits grow apace to-day. But your "do for the present" people weed their gardens and correct their faults to-morrow.

To-morrow is a Jack o' lantern. Never quit the sure ground of to-day to pursue it; if you do, expect to find yourself in a ditch or quagmire.

Woodburn, Ill.

RURALIST.

**BIRDS---THEIR USEFULNESS.**

Dr. Trimble, of Newark, N. J., in a lecture before the Sportsmen's Club of Essex County in that State, gave the following facts:

**THE BALTIMORE ORIOLE.**

He first spoke of the Baltimore Oriole, showing different specimens, illustrating how much the female and the males of different ages differ from each other. They are becoming quite numerous; large elms suiting them. This family is chiefly insectivorous. When it first arrives it feeds upon leaf-curling caterpillars—so injurious to our fruit and shade trees. Now it is feeding upon the canker worm—that terrible pest in New England. Later in the season it is found eating the drop-worms.

The lecturer stated that by aid of the microscope he had been able to prove positively that the oriole feeds upon that terrible enemy of the fruit-grower—the curculio; that a small portion of head of what was supposed to be a curculio was found amongst the comminuted contents of the stomach of one of these birds, and the microscope enabled him to count the 147 lenses in one of the eyes—the exact number known to make the eye of this particular species of the curculio faintly.

**THE DOWNTY WOODPECKER.**

This is the most valuable of all the birds of our country. It knows where to find, and is busy in searching out, the apple worm—the second in importance of the insect enemies of fruit, which, with the curculio, are the chief cause of the ruin of the fruit business, especially in our State. The chick-a-dee also feeds upon the apple-worm, but finds it accidentally, and not by boring for it, as the downy woodpecker does.

**THE CEDAR BIRD.**

Of the cedar bird, or cherry bird, the Doctor spoke at some length, wishing to rescue it from its bad reputation as a thief of cherries. It is a gross feeder, and consumes immense numbers of canker worms, span worms and other insects of that class. This bird and the yellow bird, or finch, resemble each other in one respect, both remaining in flocks till midsummer, and are thus on hand in great numbers when their services are most required; while most other birds are at home attending to their domestic duties. You find the cedar birds in New York and Philadelphia in large flocks in June, after the worms, and if they could be properly protected by closing the parks, so as not to be frightened away by the people, they would do much in ridding those cities of these pests. The yellow birds, in immense flocks, will be found in those wheat fields where the midge is so destructive. They are in pursuit of the larvae of these flies in the heads of the wheat, while the grain is in its milky state; and farmers have supposed these birds were the cause of the trouble, not knowing that they were their best friends.

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## THE WARBLERS.

The family of warblers include some 30 or 40 species. They are all small, but exclusively insectivorous—most of them are very beautiful, and some are charming songsters. Many are with us all summer, but others breed further north. They sometimes remain with us a few days, both going and coming. In the spring they will be feeding on plant lice, as found in the orchards; in the fall they stop and feed on the late brood of Palmer worms that so infest elm and maple trees, becoming exceedingly fat.

## THE WHIPPOORWILL.

Individual insects are as wonderfully made as any of the rest of creation. Moths fly only at night, yet "Solomon in all his glory was not arrayed like one of these." Ten thousand scales to form the eyes; one hundred thousand feathers to complete the wings; yet the whippoorwill will snap up dozens of them in a single night. The whippoorwill is a nocturnal bird, and its beak is so formed that it takes in moths as a net takes in fish. The eyes of flies enables them to see all around them, and the muscular force of their wings is so quick that they can dodge the rain drops in a shower; yet the swallow is so formed that it lives exclusively on insects taken on the wing.

## THE BEAKS OF BIRDS.

The beaks of all species of birds differ from each other, but the beak of each is formed exactly for taking the insects its instinct teaches to choose as its food. Many of the birds are exclusively on insects—as the warblers, meibirds and creepers. Some, again, that are used as insectivorous will occasionally take berries, cherries or grapes—as the orioles, cocking-birds, cat-birds and thrushes. Some are omnivorous, and eat almost anything, as crows and cedar-birds, and are gross feeders. In large class, as the bob-o'-links, blackbirds, crows, and some of the sparrows, will live on insects in summer and seeds in winter; or mix them when they can find both. Others again have still a wider range, as jays, crows and other-birds.

## THE ICHNEUMON.

But the most important agent in the regulation of the insect world is an order peculiar to insects. We have nothing corresponding to it in the other departments of animated creation. They are sometimes called parasites, but not correctly. Parasites are everywhere; even vegetables have them. The mistletoe is a parasite, but these are not necessarily destructive to the victim. The ichneumon is. I allude to those peculiar flies—wasp-shaped and with wings—that deposit their eggs in bodies of other insects—the young feeding upon the living flesh of these victims, and upon which they grow to maturity. This seems a strange Providence, and hard to comprehend—but still it is.

Without such an agent, the Hessian fly would have destroyed the wheat crops of this country, but with it the Hessian fly was controlled in a single season, and has been kept in check for fifty years. Thousands of other insects that would soon be troublesome are controlled in the same way, and so quietly that we hardly know how.

—  
It is the revelation of man; and not merely that, but likewise the revelation of nature working through man.

ACQUAINTANCE.—If we engage into a large acquaintance and various familiarities, we set our gates to the invaders of most of our life: we expose our life to a quotidian agony of rigid impertinences, which would make a man tremble to think of. Now, as for being known much by sight, and pointed at, I do not comprehend the honor that lies in that; however it be, every mountebank has it better than the best doctor.

## PARAGRAPHS.

ORIGINAL AND SELECTED, BY A ST. LOUIS COUNTY CORRESPONDENT.

*Wild Pigeons*—On the morning of the 6th of February, we had immense flocks of these singular birds, literally darkening the air as they passed in clouds, for hours. From inquiry, they must have extended over an area of 12 miles from East to West, and occupied some two hours in their flight from South to North. We had read of such flights of pigeons, but never saw them, nor do those who have spent fifty years in this locality remember of having seen such multitudes before.

*Another Freeze*—In 24 hours, ending on the morning of the 9th of February, the thermometer fell 68°, reaching zero at that time. On the morning of the 10th it was equally low, but the wind changed to East, and the temperature rose during the day. It snowed three inches on the evening of the 8th.

*Strawberries from Seed*—We have raised strawberries without any difficulty by sowing late in the fall or early in the spring, in light, rich soil, partially shaded on the South and West sides. The soil requires to be rather rich and moist. We have found no difficulty in getting seed to vegetate, even after having traveled thousands of miles, and being nine months old or more. Sow thinly, and take care of weeds.

*Gas Lime*—The refuse lime of gas works is of great value in the orchard, vineyard or garden. It should be used in a compost to prevent its caking; as it is apt to do if exposed to the atmosphere for a long time without stirring. Thickly applied to land in potatoes, it is very valuable. This, or old wall plaster, if powdered, we prefer to common fresh lime.

*Cider*—We have seen cider filtered through charcoal with great advantage before putting it into the barrel; the charcoal removes impurities and corrects acidity.

*Taylor Grape*—Col. Hecker of Illinois (a vineyardist from Europe), who has been engaged for seventeen years in the culture of the grape, prophesies that the Taylor or Bullitt will yet be the Reissling of the West.

*Spider's Silk*—A patent has been granted to Burt G. Wilder, for the idea or process of obtaining silk directly from living spiders or other insects, by a reeling or circular motion applied to the insects themselves. The same idea is now discovered to have been tested in Milan in 1810—1820. Mr. Wilder, in noticing a copy of a work on this subject, says:

"I trust that, so far from dragging out a precarious existence for 40 years, as it did in the Old World, this idea shall, after its present resurrection in a freer atmosphere, live to be what sober, cautious men already expect of it—a means of luxury, of comfort, and of national wealth."

*Travelling Curculios*—In an entomological conversation recently had with that indefatigable observer of the haunts and habits of insects, Dr. E. S. Hull, of Alton, he said that he had marked forty curculios caught in his curculio-catcher, and took them to a neighbor's orchard—and seventeen returned.

*Agriculture in France*—A French journal says—"The statistics for the year are not very brilliant. The wheat crop below average; wine abundant, but of ordinary quality; potatoes rotting in the storehouses—fears are entertained of not being able to preserve sufficient for seed; tobacco will furnish a better crop than was expected; walnuts and chestnuts about the ordinary quantity. The disasters of the silk-worm culture add darker shadows to the picture. Forage is abundant. Cider fruits are a valuable resource. Hemp and Colza good. All agree as to the happy conditions under which the autumn sowing has taken place."

*In Britain*—The stocks of foreign wheat now held at the principal ports of the kingdom, are small indeed—much under the usual quantity held at this period. It is very doubtful whether prices can even remain at the present rates, high as the public are apt consider these. Wheat is very short, tares and rye also short; but barley, oats, peas and beans are better.

## MARKETING PEARS.

*In every case, no matter how small the quantity of fruit to be sold, buy clean, sound casks to pack in.* It is certainly no economy to save ten cents in buying a second-hand flour barrel, when you are sure to lose more than five times that amount on the price of the fruit, by having it packed in a soiled package instead of a new one.

When the fruit attains the proper stage of ripeness, for shipping, pick the pears by hand, and put them in baskets, or take a barrel, turn it upside down, and remove the bottom by driving off the hoops. Then place some cheap white paper inside over the lid, etc.; fruit looks better when the barrel is thus lined. The pears are then laid on their sides closely together, until the top of the barrel is covered. A second layer is added in the same way as the first. Continue in this way until your barrel is one-third full—then shake gently so that the fruit will settle without being bruised. This shaking should be repeated at different times until the barrel is full—when the pears should be placed in such a position that the bottom of the barrel when pressed in will come in direct contact with the last layer; the hoops should be put on and four small nails driven through them, to keep them and bottom in place—the barrel may then be marked one, two or three, so that the consignee may know the quality of the fruit without opening each package, although he should always be advised by mail of the number of packages—and the quality of the fruit shipped.

In some instances choice pears command higher prices when packed in new half barrels—and when these are used, pack in the way described for barrels.

When pears are packed in this way, if the lid is taken off, each pear lies close in position, and the appearance presented is inviting to the purchaser—and they will always command the highest market prices. It requires only a little practice to become quite expert in packing fruit in the way described. When baskets are used they should be lined with white paper, and the pears laid in carefully by hand, shake the basket gently occasionally, so that the fruit will settle, and fill the basket a little above the level of the rim—then the covers are put on and the fruit forwarded with as much care as possible to its destination.—[P. T. Quinn.]

*SALT AND ASHES FOR HORSES*—A writer says he never knew a horse to have the colic, borts or worms, nor become a cribber, when a box of salt and ashes was in reach in his stall.



## HORTICULTURAL.

[Written for Colman's Rural World.]  
**PLANTING STRAWBERRIES.**

Plant in the spring, and plant early, is my advice, with strawberries.

Strawberry plants, unlike most others, may be set with more or less of success all through the summer; but I would never plant them in large quantities—except for special reasons—at any other time than in early spring. Planted at that season, they are, to my mind, the easiest of all plants to make live and grow; and planting strawberries is one of the simplest of all planting operations.

Some persons plant at mid-summer and meet with success; some plant in the fall, and succeed; but many, who plant at either of these seasons, meet with failure or only partial success; while those cases which do succeed, happen more by accident by catching a propitious time, or by labor and care in watering, shading, &c., as to make it costly; while if done in early spring, there is scarcely a chance for failure, and the very minimum of labor and expense.

The strawberry is a hardy, almost an Alpine plant, and its roots and leaves are excited into growth at a low temperature—and quite early in spring it commences to push out new fibres from its main roots. The best of all periods for removal is, in my opinion, immediately preceding this action of the roots; then, if all the roots are taken up and properly planted, you lose little or nothing in the removal, and every week's delay detracts something from the future growth and strength of the plant or its progeny. Nevertheless the strawberry is more tractable than almost any other plant in cultivation; but when it is as easy to plant in the spring as at any other season, always give it the preference. C. S.

### PRUNING PEACH TREES.

ED. RURAL WORLD: I wish to talk with my horticultural friends about the pruning of peach trees—I am at it now, and want to get up a chat about it, and have the opinion of other peach growers about it. Will it hurt my trees to prune in freezing weather?

Have any of you got more pruning to do than you can get through with in the spring? Or, are any of you like me: I can't get any one to cut in the right place—this is the trouble.

Now it is a nice thing to have a peach tree pruned, so that the sun and air can have the proper effect on the fruit while growing. If you have your trees in a vase form, you will not be troubled with shaded fruit: this can be

done by pruning from the inside of your trees: this cannot be done with trees that have not been started right. When young, I always cut out the centre stem of a peach tree when I plant it: this enables me to form a fine open-headed tree. I always cut back the tops of my peach trees: I find that if I don't, the under-branches will die. The sap shoots for the top, leaving a set of half or whole dead shoots behind. I cut about two feet off every leading branch, and find my lower shoots grow finely. Some say the best peaches grow on the ends of the limbs. You can have your good peaches where you please by pruning. If you want a crop of small, mean peaches, don't prune at all. If you want a few fine peaches out of your reach, leave a centre stem to your trees, and you will soon have all your good peaches where all the sap naturally runs. I don't believe in letting my trees grow high. By annual cutting back, can always have a fine growth of young, healthy shoots, which will bear fine, large fruit every year.

How my experience will clash with more experienced growers, I want to know. Hoping that others will explain their mode of pruning and the consequences, in the *Rural World*, I will prune away, cold or hot. If I kill my trees by pruning in cold weather, I will tell you about it.

Rockwood, Ill., J.

[Written for Colman's Rural World.]  
**ON THE CULTURE OF THE GRAPE VINE.—No. 4.**

BY DR. LOUIS L. KOCH, GOLCONDA, ILL.

### TREATMENT FOURTH YEAR.

Fourth Spring.—The young branches of the stock three years old, each having been cut back to two or four buds, the latter, as has

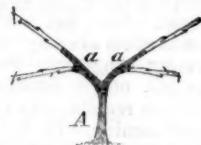


been remarked, depending upon circumstances, there yet remain, when they branch out on each side, two of them, and if possible the upper and lowermost, while the remaining two are broken off. For safety's sake, this operation should be performed only when there is no more late frost to be feared, and in no case before the full development of the buds.

The four branches produced from these buds each of them rendering in the fourth year, after their own natural law, two grapes, thus eight grapes are the first tribute of this young stock, and which without any hindrance whatever to its prosperity may be left undisturbed upon the vine to full maturity, as we let them grow in the last year until fall cutting, and require no further treatment or attention, than afterwards to carefully tie them to the espalier at such an angle as the laterals of the vine may be desired to occupy. To tie these young summer branches I find our so-called gunny-bag thread best suited.

Fourth Fall.—These already very luxuriant four branches, grown from the spring buds, are conditioned by previously suggested circumstances, and must be cut back in the fall to three buds, when we are invited to behold the young vine in its fourth fall with its stock

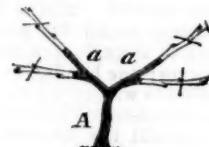
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at every stop of the last year wood (new laterals) a young branch bearing three buds.

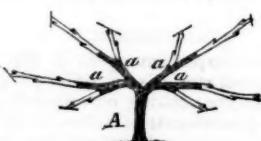
### TREATMENT FIFTH YEAR.

Fifth Spring.—In this year the treatment is also the same as in the preceding. With a



similar regard to time, the middle bud of the three on these four young branches spoken of (when treating of the last fall cutting), is broken off, and now the upper and lower ones left to grow. There remain accordingly eight buds upon the vine, from each of which one branch is produced, bearing two grapes, consequently sixteen grapes; say at one-fourth pound a bunch, it will be four pounds of grapes as the yield of the fifth year. These young branches too are treated until the next fall as they have been in the past year; and, if growing too luxuriantly, may be reduced with all their layers in the fall to some extent, which will tend to ripen their wood so much earlier, without interrupting the circulation of its sap.

Fifth Fall.—In the fall those four young branches most approximate to each lateral



are cut back to two buds, while those further above to three. The vine exhibits now in its continuing development the stock A, four laterals a, each of which laterals again display young branch bearing two buds on the inside and three on the outside.

### PEAR TREES.

ED. RURAL WORLD: I have had several sick trees, especially pear trees, within the last five years, all of which are now fully recovered. The sickness was noticed first in early spring and summer, by their want of vigor, small leaves, few and yellow—and in a few of the worst cases the bark of the limbs was very much shrivelled. As soon as discovered I took away the earth from the stem and main root, but found them apparently sound—the wood of the large and small limbs being of good color—or only too dry for the season. I saved a few large standard Bartlett after it seemed about dead, though it had a fair crop of fruit as big as marbles. I immediately cut back all the branches, leader and all, big and little, from one to two years' growth (counting back), in some cases half way from the beginning and end of the third years' growth. It

put out fresh leaves, and made a fair wood growth that season; beside ripening nearly half a bushel of fine pears. This I should not have allowed, as the ripening of a crop was too great a tax on its vitality. Several dwarf pear trees were also affected in the same way. All were saved in the same way.

The heroic method of treatment is the only successful one, in the case of trees at least.

Several varieties of pear have been thus affected, showing no cause for their sudden sickness and death—for they will die in all cases where neglected. If I see a want of vigor in trees in mid or late summer, I always give them a very severe late winter pruning, and then give them some lime, ashes, and a good mulch. We have some splendid specimens of dwarf trees, remarkable for vigor and beauty of form, that had been pronounced "gone up," at one time, by persons visiting the orchard.

Makanda, Ill.

V. K. D.

[Written for Colman's Rural World.]

#### SWEET HERBS.

Noticing an inquiry in reference to the culture of Sage, I thought a short article on the culture of Sweet Herbs generally, might induce some to produce for themselves articles, which cost more in looking up when wanted than in their production.

The culture of these plants is very simple. The plants more generally grown as sweet herbs are, Thyme, Sage, Summer Savory, and Sweet Marjoram.

A small bed, say four or five feet square, of either, will furnish a family supply. They are raised and sold in their green state by market gardeners in the vicinity of cities. They are all grown from the seed annually, although biennials; started in a seed bed and transplanted in June or July. But for the common garden they are grown as biennials.

The seed is sown thinly in drills, and lightly covered with fine soil. Thyme and sage are the most generally grown. Plants grown from the seed are preferable, as the young plants produce a much better article than bushes of an older growth; although, as a general thing, when a bed is once started, it is retained several years till nearly or quite exhausted. The variety known as the Broad Leaved is the best.

A rich, mellow, sandy loam is best; but any loamy, well-drained soil, or at least not retentive of wet, is suitable.

Prepare the bed as soon in spring as the ground may be well worked; make the surface soil fine and mellow with rake, and sow seed in drills one foot apart; cover half an inch in depth; roll lightly.

When the plants first come up, they are quite small; as soon as distinguishable dress them with the rake, loosening the surface and destroying weeds. Cultivate thus often.

When up three or four inches, thin to ten or twelve inches in the row. These plants may be transplanted, or trimmed and preserved for use.

Well cultivated in rich soil, it will do to cut in September and give a fine cutting.

If the ground be covered, cut out every other plant a little earlier, and leave the others

later, when it will be larger. The top of the plants only are cut off, leaving three or four inches of the stem and a few leaves.

The following season there should be some fertilizer dug in, in spring, and the ground between the plants made mellow and kept clean of weeds as before.

This season, and thereafter, so long as the plants do well, it will furnish two cuttings each season. It is best not to cut too close, or let any run to seed, as either will injure the roots. If seed is desired, let one or two roots go up without cutting. All the secret in growing any of the herbs, is in having mellow soil kept free of weeds. Thyme and the other herbs require about the same culture, and are grown at about the same distance, so that in describing one we have them all. H.

[Written for Colman's Rural World.]

#### CITY GARDENS.

In passing through those streets of St. Louis, where the residences of the wealthy most abound, it has often occurred to me that the residents thereof exhibited a very poor appreciation of the "fitness of things" in the matter of designing, planning, and laying out their small squares and garden plats, so as to have them appear to the best advantage, and make the most of the space: but more especially in the matter of selecting such trees, shrubs and flowers, with which to adorn them. But, then, it is hardly to be expected that men who have been brought up to the desk, the counter and the bench, and who are all their lives engaged in mercantile or manufacturing pursuits, should be *au fait* in gardening. For while there are exceptions, and a few find time to study horticulture—the majority do not—and it is not to be expected that they ever will.

St. Louis is sadly in need of a few skilful jobbing gardeners; men able to plan and lay out city and suburban gardens, and know what plants, shrubs, &c., are best for every situation, as they are variously affected by exposure and shade, soil and circumstances.

These men should be called in just as the architect is—to furnish a design and carry out the same in the garden; and his judgment should be sufficient, especially in the selection of plants, so as to produce harmony. I believe that a few educated gardeners could build up a good business of that kind here, and that the most of our citizens would gladly call in their aid, pay liberally, and be relieved from the unpleasant alternative of attempting it themselves—generally making a failure of it or neglecting it altogether—or turning it over to the hired man, with a result generally the same.

Of course, the planning, laying-out, furnishing, and after-keeping of the garden, would be a small item compared with the cost of the residence: and he would be foolish indeed who would spend from \$10,000 to \$20,000 in the erection of a fine architectural dwelling, and then begrudge a few hundred to the laying out and planting the few hundred feet or rods of ground to the very best advantage that ground was capable of—especially when we consider how much of pleasure, refinement and luxury,

the green grass, beautiful flowers, shrubs and trees, are capable of contributing: and yet this is just what we very often see, though I believe it is generally because of the lack of suitable professional skill being found in the city.

Besides the formation and planting of new gardens; the altering and improving of old ones: it is the business of the jobbing gardener to keep places of all sizes in order during the year, either by contract or by the day, for which purpose he would require to employ more or less hands, just as the builder employs his mechanics to work out his contracts. And, somewhat like the mason, too, the winter season would see a good deal of his work laid up, and he would have but little for himself or men to do, and, as a consequence, they must be paid somewhat in proportion during summer, though that would never be as high as skilful mechanics command; skilful laborers could, in a short time, be trained to routine gardening, if they could only be kept: here we apprehend the greatest difficulty.

In addition, the jobbing gardener, who must reside in or near the city, might have a greenhouse or two of his own, to furnish employment during the winter months, and from which to draw many of his supplies for the gardens he laid out and planted, thereby affording him another source of revenue and profit.

We should be glad to see an improvement of this kind take place in our city, and think there is much room, and it is much needed. S.

#### CHERRIES IN SOUTHERN ILLS.

ED. RURAL WORLD:—Some years ago there was much excitement here about peaches, pears, apples, strawberries, grapes, sweet potatoes, tomatoes, &c., and there has been a very large demand for such. As yet, this section has not been visited with the cherry fever, but we expect it before many years.

Eight years ago, we planted out specimen trees—unfortunately they were all but one on the Mazzard. The Mazzard was seriously injured here three years ago this winter. An English Morello on Mahaleb stock has done better. Eight years ago, a neighbor planted out one hundred Early Richmond on Mazzard roots: they have not paid. Another, living near Jonesboro, planted out one Early May Cherry tree, and budded from it on the common Morello six more trees; seven years after, he sold \$38 worth of cherries. Joshua Lewis, of Cobden, seven years ago bought one Gov. Wood tree from Rochester, N.Y.; budded on Morello from it, and four years after those trees yielded four to six dollars per tree; the tree from New York never bore satisfactory crops.

B. Willey, of Makanda, has a Gov. Wood cherry tree; in 1865 it was full, but a flock of birds came and took them all. A neighbor of his, Jno. F. Dickerson, has a Gov. Wood, nine years old, it has bore several crops; last year he sold the cherries for over twelve dollars. A neighbor of mine has an Early Purple Guigne cherry tree; one year he sowed his orchard to wheat, this checked growth and hardened the tree; the next year it fruited; and I regard them as the finest early cherry in cul-



whether it would pay—whether the interest on the money in deep trenching would not plant a new vineyard. Thought shallow planting (about ten inches) the best.

Mr. Trabue of Haunibal, sub-soiled 18 to 20 inches deep, and trenched some and underdrained. Cost \$16 per acre to subsoil, and \$200 per acre to trench three-and-a-half or four feet deep and underdrain. Those vines immediately over the drains grew much faster than those farther away. The Adirondac grew rapidly—two canes fifteen feet each last year.

Dr. Claggett said, a friend of his had vineyard planted shallow, and it did so poorly that he dug them up and planted them deeper.

Mr. Riehl said, at Alton the sub-soil was nearly as good as the top-soil. But in St Louis county, the sub-soil is far different and should not be trenched or sub-soiled. The ground will pack harder than before sub-soiling.

Dr. B. F. Long, Alton—Back from the river two miles—plows deep, say twelve inches; but plants shallow; keeps weeds down.

Mr. Starr planted on ground plowed as for corn and has done better than most any other one. Imitate the forest. Mulch the ground.

Mr. Snedeker follows one plow with another, with a sub-soil attachment following the last one. This loosens it twenty inches deep. This is the best preparation he knows of. It will not settle down hard, but remain mellow to that depth during a man's life time.

Mr. Watson had planted both shallow and deep on clay loam that drains naturally. He thinks the deep planted did best. He pulverized the ground very deep—nearly three feet. Sub-soil, red clay with a little loam, with natural drainage.

Mr. Riehl said it would not do to throw to the surface a stiff sub-soil. And no general rule can be given for preparing the ground, as this must always be determined by the nature of the soil and sub-soil.

Mr. Mahan said, at Centralia there is a stiff impervious hard pan, eighteen inches under the surface. The vine does well here. The soil is worked not very deep, and surface drainage is secured by ridging slightly. We have a few good wine maker who are very successful. Some vines have been planted two inches deep and done well. Plow a deep double furrow where the row is wanted and then throw the soil back, raising a slight ridge.

The President announced committees on the following subjects, *viz.*:

Fruits—George Husmann, chairman.

Wines—C. W. Spaulding, chairman.

Wines, other than from Grapes—Dr. H. Claggett, chairman.

Gallizing Wine—W. C. Flagg, chairman.

An address upon "The Apple" was then delivered by W. C. Flagg, of Moro, Ill.

It was an extensive enquiry into the origin and history of the apple, and, indeed, into everything connected with apple.

### THIRD DAY.

J. H. Tice read an essay on, "Why evergreens should be planted." It was well received, and was followed by a long discussion.

Mr. Tice read the report of the Committee on Orchards—showing that the crop was short, and that the past year was in every respect a bad one for the orchardist.

### THE CANKER WORM.

Mr. Flagg inquired for the canker worm. Said there was some complaint of its ravages on the leaves. After dropping from the tree, and hatching, it goes into the ground. He suspects that late breaking up of the ground in the fall will expose it to cold as to kill it.

Dr. Long had seen it very destructive. Hogs, turned in June, had rooted up all the ground to find the larvae. The next year the orchard had a good crop, while neighboring orchards were nearly eaten up. Had also utterly destroyed them by very late plowing in the fall. The worm is the inch worm, doubling up as it travels.

The Society adjourned to visit the Fruit Preserving House, having been previously invited. We saw there summer fruits, looking as fair as when gathered. Especially the Catawba grape was in excellent condition, with flavor perfect. But the Concord, though rather plump, was flavorless.

### LAST DAY.

In wines there were fine samples of Catawba of '65. That shown by Geo. Husmann was judged the best, and that from the American Wine Company, a beautiful wine of very light color, second. In Catawba of '66, first class was awarded to F. Braches, and second to Michael Poeschel and Francis Langendorf.

In Herbemonts, Geo. Husmann, first; and Michael Poeschel, second.

Taylor's Bullitt—Geo. Husmann, first; Eisenmeyer

& Bro., second. Cunningham, Delaware and Rulander, Geo. Husmann, only exhibitor.

Rogers' Hybrid, No. 1.—The first of the kind ever manufactured in this State. Geo. Husmann.

In red wines the report was:

Concord—Vintage of '65: Geo. Husmann. Vintage of '66: Michael Poeschel, first; Francis Langendorf, second.

Norton, '65—Geo. Husmann, first; American Wine Company, second.

Vintage '66—Nicholas Green, first; Michael Poeschel, second.

Clinton, '65—First, unknown; second, Mr. Husmann.

Cynthiana, '66—Above Norton and Mr. Husmann awarded class first.

The Imperial, shown by the American Wine Company, is a superior "sparkling" wine, which appears to consist of mixed varieties. The wines are of fully average quality, a portion of them being very fine.

Dr. H. Claggett read an essay on the Marketing of Fruits.

T. R. Allen read an Essay on "Education for the Pursuit of Horticulture and some of the Obstacles in the way of its Development."

The President announced the Standing Committees, as follows:

Flowers—Carew Sanders, Wm. D'Oench, C. N. Saxon, Dr. B. F. Long, Charles Connon.

Entomology, 1867—Dr. E. S. Hull, Prof. G. C. Swallow, Dr. C. W. Spalding, Wm. Minor, J. H. Tice.

Business Committee—Charles Peabody, S. M. Bayles, E. R. Mason, Oliver Quinette, Carew Sanders.

To Increase Membership—J. P. Helfenstein, J. M. Jordan, Isador Bush, Wm. T. Essex, Dr. H. Claggett, R. S. Elliot.

Vineyards, 1867—George Husmann, W. C. Flagg, T. W. Gage, L. D. Morse, S. F. Taft, J. S. Stevens, H. M. Vories.

Orchards, 1867—O. H. P. Lear, D. W. Bryant, O. A. A. Gardener, B. W. Davis, J. A. Pettengill.

The following discussion took place in reference to the Committee's Report on the Agricultural College question, and being lengthy we have placed it last in our summary.

Prof. Swallow objected to the report as making a discrimination against a single institution—the State University. We can say any institution in the State.

Why point out one institution and leave out all the others? Why this idea that literary professors should be kept out and have nothing to do with it? Why exclude Boone county from competition for the location of this College? When the State was poor, and wished to erect a University, Boone county nobly came forward and gave a hundred and twenty thousand dollars in cash, and not another dollar has been paid by any other county or even the State from that day to this, to sustain the University. I am no advocate for Boone county—but for consistency in this Society. The literary, scientific, intelligent men of this Society, should, above all other men in the State, not be narrow-minded. This old county Boone deserves the thanks of this Society for their noble conduct in behalf of the Education of the State in the time long past. Boone county is not controlling this institution, Boone only pays the money, the State controls it. We want it still so. One class in Agriculture has graduated in this University, and sent out a class of sixteen as fine, well qualified young men, as ever left an institution. And besides, sixteen years ago, a Professor in that University wrote an address on this very subject, which was published and resulted in starting the Mechanical and Agricultural Association of Boone, and the Agricultural and Mechanical Association of St. Louis. These things being so, I think it ungenerous in this Society to especially point out this University and this county with so much inviolability; and, as one of the first members of this Society, I wish to prevent its taking this wrong position. As far as the having an independent college and management is concerned, I agree with the Committee.

I think the gentleman who wrote the article in last year's State Report, on Agricultural Colleges, deserves our thanks; it is the best article that has appeared on the subject; it has swept away the trash that has been tried as arguments against it. In 1849 I was appointed to take charge of such an institution at Ovid, and would not, as there were not funds sufficient to support it. I had just gone through such an experiment in Maine; it failed there in 1848 for want of means. Now, we want to avoid the possibility of failure here; we want the whole fund, and as much more as can be gotten; and if Boone comes forward with the best offer, why should we exclude her? Why, if she gives most, should we not have it located there? I suggest that this part of the report be taken out.

J. H. Tice. We do not want to do injustice to Boone county. It was brought in from its connection with the letter that called out the report. I will gladly strike out anything that would tend to injustice or wrong ideas.

Prof. Swallow. Do this or let the other colleges be named. Now, I will unite on this point: "let this Society act upon general principles." Wherever these institutions are organized, they should be as independent institutions; and if it comes to Columbia it should be a distinct college, with a distinct Board of Management and Faculty. If we should want a professor of chemistry, what objection can there be to having our University professor or the use of our University apparatus. If one man can act as Professor to our College and to three or four more colleges, can there be any reasonable objection to it? It is so in several of our colleges in the East, and Oxford University, so far-famed, has some forty-two distinct colleges. If we cannot pay alone a sufficiency to maintain a good faculty, why can't we unite and pay them. Another objection in the minds of some is we cannot get the two classes of students to agree together. They agree together everywhere in life; and if they come to a college fight, I will guarantee the farmer-boys will take care of themselves, and I will always help them if need be. By locating it there, we can save a part of the salaries of five professors; this will be a good point gained, everything else being equal, and we will save something worth while. We have the example of other States in the Union to guide us; some of the States have united their institutions; a few others have them independent. I should like the College located in St. Louis county, for I intend to make it my home; but because of this I need not injure any other county, or attempt to control its action on this matter or that of the State to my use. Boone county made the inatory movement to establish these institutions. She made the attempt to found an Agricultural College; but the action of the Legislature, by influences from this city and elsewhere, broke it down. This experimental class of sixteen graduated in 1857 in this State University, it was done by men in this institution, it had students from nearly every State from Texas to Minnesota and some of the best men of our State. Instead of being prejudiced against this Institution we should thank it. It is thought and asserted that our classical professors are against all such institutions. I think I have shown this not to have been the case in this instance, and hope that, like noble men, when we know the facts, we will allow our feelings to change a little in regard to the men who did this work.

Dr. Claggett. I would like, as a member of this committee, to say a few words on this subject. This committee has not picked out Boone county. It was upon the phase in which the facts were presented to them that they based their report. What we mainly and emphatically want is a distinct institution, having it under our own control and not incorporated with any other institution. If Boone does try to do her best we will give her thanks, but whether located in Boone or any other county it must be distinct.

The following Resolutions were adopted on the Agricultural College question.

Resolved, That the Missouri State Horticultural Society, representing a large and growing interest of the State, and one of the most important branches of agriculture, do earnestly and solemnly protest against the division of the agricultural fund.

Resolved, That we are now, as we always have been, in favor of the Industrial College to be an independent institution, separate and disconnected from any college or other literary institution, for the reason that we believe such to have been the intention of Congress, and that it will best promote the object intended, and the interest of the industrial masses for whose benefit the donation was made.

Resolved, That should the Industrial College be located in connection with, or entirely separate from other institutions, it should be entirely independent and have a separate board of managers.

Resolved, That it is the opinion of this Society that by a prudent management of the lands and of the proceeds of the sales thereof, a rich endowment can be realized for sustaining an agricultural college that will not only confer great and inestimable blessings upon our industrial classes, but will be a credit and honor to the State.

Resolved, That in order to give an opportunity to the people of the State to show their liberality, the locality of said College to be left to open competition, to be assigned to that county making the best offer.

Resolved, That the best way for disposing of the lands will be by adopting the Iowa method, or something similar, and sell the same for a long credit, say from ten to twenty years, with an annual interest of 8 per cent.

Resolved, That we most earnestly ask the Representatives of the people of Missouri, in General Assembly convened, representing as they do a constituency mostly agricultural and entirely industrial, to deal with this momentous question so as to conform with

the wishes of those whose interests are to be affected by it, and to whose instrumentality the fund in question owes its existence.

Resolved, That the foregoing report and resolutions express the wishes and desires of the horticulturists in convention assembled, and, as we believe, of the industrial classes in the State.

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**Meramec Horticultural Society.**

ELM GROVE, February 7th, 1867.

The Ninety-eighth Meeting was held at the residence of Mr. L. D. Votaw. President Seymour in the chair. It was Resolved—That the ladies, who have ever countenanced and encouraged our efforts as Horticulturists, and cheer us with the light of their pleasant faces, be requested to arrange among themselves to produce an essay at each meeting.

The Executive Committee reported the appointment of the following members to read Monthly Essays. March, J. S. Seymour; April, L. D. Votaw; May, G. L. Davis; June, F. W. Braches; July, A. M. McPherson; August, Dr. J. B. H. Beale; September, A. Fendler; November, Jas. L. Bell.

The Executive Committee presented Memorials on Agricultural Colleges and on the Representation of Horticultural Societies in the State Board of Agriculture.

Adopted and ordered to be presented to the State Legislature through the Hon. N. J. Colman.

The Fruit Committee reported samples of "Wine Sap" apples, by L. D. Votaw; and "Jeneton," by Wm. Harris.

Vegetable Committee reported samples of Fluke and Peach Blow potatoes, by L. D. Votaw.

Flower Committee reported a very fine Flower Basket, composed of dried flowers, moss and fungi, and ornamented with shells, by Miss Mary Harris.

Wine Committee reported samples of Concord, Blackberry and Strawberry Wine, made by L. D. Votaw; also samples of imported Claret, and Peach Brandy made in Franklin county, an excellent article but requiring age to develop its qualities.

Some sections of portable fence brought from Venezuela, and much used there, with some fancy "pine whittling," was exhibited by Lewis De Hanyer. The fence was simple and efficient, similar if not identical, with some exhibited at the first St. Louis Fair.

An Essay was read by Dr. A. W. McPherson on "The Preservation and Management of our Forests." It exhibited the value of wood in all the operations of life; denounced the senseless waste of timber in clearing land; exhorted all to spare it, and to replant in many places at once, as a means of improving the climate and keeping up the supply for posterity.

A member said, the winters were more severe and precarious, the amount of water discharged by the rivers and streams less, and many of the best springs in even our own neighborhood were drying up. The cutting and notching timber in hunting, cutting poles, and firing woods, were denounced, and a change in the law suggested, so as to have severer penalties—their action failing to reach the worst of offenders in many instances.

Mr. Bell said that in the upper counties he had observed that, between '37 and '54, the danger to the crops was from too much rain; since '54, the principal danger was from drought; this indicated a change in the climate from some cause.

L. D. Votaw thought the winters had been more severe since '50—much more changeable; peaches were then more certain as about 3 to 1; they were seldom winter killed—sometimes killed in spring.—Had heard it stated in another Society that there was more timber now than formerly. This was not the case, as a general thing, but the reverse; in some naked or prairie places there were now more trees than formerly. Here, in this bottom, the great trouble formerly was the river—now, there is little to fear from it. Wheat did not then freeze out so much, but thinks it rusted more.

G. W. Davis said, from '28 to '42, bricklayers could work all winter, except '31 and '32; from '42 to '54 it was more irregular, and now the rule is that we cannot work during winter at all. W. Muir, Sec.

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**Shelter of Evergreens**—In conversing with the late Judge Tippett upon this subject, he instanced a clump of 13 to 18 fig trees, near the home of his early years, near the coast in Maryland, from which, year after year, he gathered an abundance of fruit. They were surrounded by a dense clump of pine trees—their only protection.



**EDITOR'S TABLE.**

**PREMIUMS FOR OUR LAST VOLUME.**—We are pleased to learn that the many thousand grape vines sent out as premiums last spring, reached their destination in good order, and made a fine growth last summer. It will not be long, (if we continue to send out grape vines as we did last spring, and shall do the ensuing spring,) before every person can sit under his own vine, laden with luscious fruit, if he can't under his own fig tree.

In some few cases, where the mail facilities were very poor, and the distance very remote, some of the vines did not stand the journey—but we have only heard of two or three such cases. We were very careful to wrap the roots carefully in damp moss, and to use every possible precaution to insure their safe transit—Our increased experience will enable us to still more successfully send our Premium Vines the coming spring—and where the distance is remote, if the mail facilities are really abominable, it would be better for Agents to order the vines to be sent by Express.

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**NEW BOOKS.**

We have received from Orange Judd & Co., Agricultural Booksellers, 41 Park Row, New York, "The American Agricultural Annual for 1867," containing an Almanac, and Hints for Each Month, and a variety of interesting matter. Price, 50 cents in paper; cloth, 75 cents. Also, another work, "The American Horticultural Annual, for 1867," same price and style, but intended for the Gardener, Fruit Grower and Florist. Both of these works are neatly gotten up and are very valuable, and can be had of the publishers.

"GARDENING FOR PROFIT," is the title of a new work, from the same publishing house as noticed above. It is a volume of 243 pages, and is intended as a "Guide to the Successful Cultivation of the Market and Family Garden." Price, \$1.50, well bound and illustrated.

**THE AMERICAN FARMER'S HORSE BOOK**, from the book house of Zeigler, McCurdy & Co., 509 Olive Street, St. Louis. This is a large volume of 600 pages, printed with large, clear type, on good paper, and is well bound and illustrated. It is written by Robert Stewart, M. D., V. S.

It treats of the structure of the horse; of the bones, feet, glands and nasal membranes; the eye, muscles and tendons; skin and ears; brain and nervous system; teeth, mouth, throat, chest and lungs; stomach and bowels; liver, urinary organs, heart, blood, &c.; poisons:—the above constitutes the department treating of the numerous diseases that horse-flesh is subject to. It then proceeds to treat of feeding, breeding, raising, breaking, training, fractures, shoeing, vices and unsoundness of horses.—Medical preparations; and table of symptoms to facilitate the detection of disease. We extract the following from the preface:

"It is distinctively American, treating more fully and explicitly of the diseases peculiar to the American horse—more especially those peculiar to the Valley of the Mississippi."

Our readers who desire to get this comprehensive work, which sells at a very low price, would do well to correspond with Zeigler, McCurdy & Co., 509 Olive St., St. Louis, Mo.

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**THE ORIGIN OF PRAIRIES.**

We have received an interesting article on this subject from A. Fendler, Esq., which will be commenced in our next issue.

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**THE PREMIUMS.**

The Premium Grape Vines and Raspberry Plants will be sent out as soon as the weather becomes sufficiently propitious for their safe transportation. We shall apprise our Club Agents, through the columns of the *World*, when we commence packing. In the meantime, we hope they will canvass thoroughly their neighborhoods for new subscribers.

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**TO KEEP OFF HOG CHOLERA.**—F. F. Fine, of Carondelet, Mo., hands us the following recipe, as a preventive of this disease. "Give Assaftetida plentifully in cooked feed, and wood ashes and tar plentifully in their trough and where they can rub the tar. I lost one, about six years ago, with cholera; but others sick at the same time were cured with the above remedies. I have had no sickness among my hogs since, while my neighbors have lost nearly all, and mine have run with them. One dollar and seventy-five cents of assaftetida lasted me one year for fifteen head."

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**SPECIMEN NUMBERS.**

We sometimes send specimen numbers of the *Rural World* to those who are not subscribers, but who we think would like to take just such a journal as the *Rural* is. We want them to read it, to critically examine its several departments, its varied contents. If they think they would like to receive such a journal regularly throughout the year, we shall be very glad to receive their names and subscriptions.

We invite their attention to our liberal premium list, which may be found in another column. Clubs are always in order. Back numbers for 1867 can still be supplied to all new subscribers.

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**NEW ADVERTISEMENTS.**

Flower Seeds in Collections, J. M. Thorburn & Co., 15 John St., New York, see page 77

Novelties in Vegetable Seeds, J. M. Thorburn & Co., 15 John St., New York, see page 77

Novelties in Flower Seeds, J. M. Thorburn & Co., 15 John St., New York, see page 77

Wanted 3 or 4 Farmers, Zeigler, McCurdy & Co., St. Louis, see page 76

Stallions to stand at Highland Farm, in St. Louis County, B. F. Hutchison, see page 77

Shaker Fancy Potatoes, John Borland & Co., Morrisville, Pa., see page 76

Nansemond Sweet Potatoes, Murray & Co., Foster's Crossings, Ohio, see page 76



Written for Colman's Rural World.

#### The Hearthstone of the Heart.

There is a hearthstone in each human heart  
At which the spirit worships, visits again  
At will, commingling with the household there—  
Brother and sister and the aged sire.  
And thus when evening comes the heart will blossom,  
Oft at the touch of some faint melody  
That wakes to life the forms again, silent  
And happy, though with tears we view them—  
Silent, though still we hear their voices pleasant.  
And other idols dwell around the hearthstone,  
Invisible images, that talk at night  
In waters, whisper in the breeze at morning,  
And start familiar from each nook uncalled. F.G.

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#### WHO ARE THE PERSEVERING?

Not they that persevere for awhile, and then give up. This is just the reverse of perseverance. The world is full of such perseverance—and it is little better than nothing at all. Perseverance means to stick to, through thick and thin. The aspirer after success puts his hand upon it, and there holds with a grip that will not yield. It may be up-hill business—nay is—but the hand is there, and it will not let go. Discouragements come like boulders tumbling down—but there is no let go to the resolute man. Though his way is dark and blank, and there is a prospect of almost certain failure—though he has tried and tried, and not succeeded—made but little progress—gets smitten on the heart with a chill, despair beaming in his face—yet he will unsettle himself, *try to work along*, even if he have to beat the wind only, which is raging. Look at him—his hold is still there—his motto onward! All this while, he is gaining, making progress.—The weak-hearted would have given up here, especially if these times of trial were frequently repeated—more especially if there were darkness all the while. But the man, bound to win, will go if it is darkness all the way—his life is devoted to that purpose—and he must fail or win, there is no middle course! It is a great undertaking—high success is—and it must be done through great tribulation, through great labor. "Capacity" has nothing to do in the eyes of such a man; he thinks only of the goal and how to obtain it; and the way is to push on, on—never halting, never resting. This is what secures; this is what wins: and this it is to persevere. Without it, high success can *never* be obtained.

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The happiest are they who have also the most unhappiness. It is well it is so, or the trials of life could not be endured.

The best farmer is the one most intelligent.

#### The Turkish Bath as I Found It.

I had read the descriptions of Urquhart and others, and had often wished I might some time find myself under the beautiful skies of the Orient, indulging, even with "the infidel Turk," in the great luxury of the bath of baths. Well, I have been there—not to Turkey exactly, but to the bath—and as others may have the same curiosity and the same desire, I am going to tell your readers, Mr. Editor, very briefly, where it is and what it is.

Rushing up Columbia street, Brooklyn Heights, one day, at the usual rate of go-ahead American locomotion, I was brought to a stand at the top of the hill by a not very conspicuous sign, which informs the passer, in plain English, that the Turkish Bath is to be had within. Was this to be the realization of my Oriental dream? I looked up at the building. There was nothing particularly Oriental about that. It was not even in the Byzantine style of architecture. "No matter," thought I, "this shall be the 'East' to me, and I will seek in the 'hamam' within my 'Solace for the cares of life.'" I forgot that I was "in a hurry," (we are always in a hurry in this country,) and went in.

I was politely received by the gentlemanly proprietor, Dr. Shepard, and conducted to the suite of rooms appropriated to the bath.

We first entered the *frigidarium*, (as the Romans called it,) or, in plain vernacular, cooling room. Here, turbaned and wrapped in snowy linen, bearded figures reclined luxuriously on couches, seemingly as forgetful of the bustle of Broadway, the excitement of Wall street, and the price of gold, as if they had been in Constantinople, instead of the "City of Churches." The atmosphere of this room was cool, but not cold—just comfortable—and it was beautifully adorned, and seemed to invite repose.

Retiring to the curtained recess prepared for that purpose, I disrobed, and was conducted by a dusky attendant (you may imagine him a Moor if you will) to the *tepidarium*, or warm room. Here, after bathing my head, according to directions, in tepid water, I reclined on a couch till a slight perspiration broke out, which was perhaps a quarter of an hour. The temperature of this room is about 110 deg. Fahr. Being now sufficiently attempered, I was led to the next room of the series, called the *calidarium*, or hot room. Here the temperature is tropical, about 140 deg. This may seem pretty hot, but being already in a state of perspiration, which is immediately increased, the sensations experienced on entering are but slightly if at all unpleasant, and soon become decidedly pleasure able, the evaporation from the body keeping its temperature much lower than would at first be supposed. Here again one reclines on a couch and, with a wet sponge for a pillow, gives himself up to a glorious repose. His muscles relax, and with them his too tense nerves. He is soothed and quieted. The cares of business, that had so vexed him during the day, are forgotten, or, if thought of at all, seem matters of little consequence. Who cares whether stocks have gone up or down? It is all the same to the bather in the *calidarium*. He is the true optimist, and knowing all things are for the best, takes his comfort and lets the world wag.

Having remained in the hot-room till my skin was found in a proper state for the next operation—fifteen minutes or more, perhaps—but the time varies with different persons and under different conditions of body, the attendant approached and commenced the prescribed manipulations called shampooing, but about which there is not so much "sham" as you might suppose. This is an important part of the process; peeling off the incrustations of effete matter which we suffer to accumulate on our bodies, opening the million of pores which everywhere pierce the skin, and giving suppleness to every muscle.

After the shampooing, I was conducted to the *lavatorium*, or washing room, where, after a liberal use of sweet-scented soap and the flesh-brush, and sundry ablutions with warm, tepid, and cool water, I was turbaned, robed in white, and sent back to where I had started—to the cooling room—to make myself comfortable till cool and dry enough to resume my ordinary costume. The whole process occupied something over an hour, but might have been prolonged with pleasure and probably with profit. I left the bath feeling like a new man—younger by half a dozen years—and tranquil and happy in proportion. I can now appreciate Homer's line, in which he speaks of Achilles as issuing from the bath looking "taller, and fairer, and nearer the Gods;" and say, with Willis, "If I am to conceive a romance or indite an epithalamium, send me to the bath on a day of idleness; and covering me up with snowy and lavendered napkins, leave me till sunset." Others may do as they like, but I shall not allow the semi-barbarous Turks, the swarthy Moors, and the black-bearded Egyptians to have a monopoly of one of the greatest luxuries yet invented by man.

Of the bath as a hygienic agency and a beautifier, I may, with your permission, Mr. Editor, speak at another time, assuring the ladies here, however, that as a cosmetic neither Delue or Phalon sell anything worthy to be mentioned in the same day with the genuine Turkish Bath.

—[Cor. Brooklyn Eagle.]

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**SELFISHNESS REBUKED.**—A poor old man, busily planting an apple tree, was rudely asked, "What do you plant trees for? you can't expect to eat the fruit of them." He raised himself up, and, leaning upon his spade, answered, "Some one planted trees before I was born, and I have eaten the fruit. I now plant for others, to show my gratitude when I am dead." Thus should we think and act for the welfare of others.

**LOST TIME.**—Lost wealth may be restored by industry; the wreck of health regained by temperance; forgotten knowledge restored by study; alienated friendship smoothed into forgetfulness; even forfeited reputation won by penitence and virtue; but who ever again looked upon his vanished hours—recalled his slighted years, stamped them with wisdom, or effaced from heaven's record the fearful blot of wasted time?

**OVERWORK AND UNDERWORK.**—"While over-work," says a medical writer, "is a great evil from which one class of society suffers; another class suffers still more from under-work, or idleness. Better wear out than rust out, if it is done in a good cause; for then some good will be accomplished, and humanity will be the better for it. But the true course is to avoid both extremities and pursue the even tenor of a happy medium. By so doing, a far greater amount of labor can be accomplished, at less expense of health, strength and vitality."

**SHORT AND FALSE PLEASURES** deceive us, and like drunkenness and revenge are the madness of one hour for the sad repentance of a lifetime.

**AGREEABLE QUALITIES.**—The most agreeable of all companions is a simple, frank man, without any high pretensions to an oppressive greatness—one who loves life, and understands the use of it; obliging alike at all hours; above all, of a golden temper, and steadfast as an anchor. For such a one we gladly exchange the greatest genius, the most brilliant wit, the profoundest thinker.

He who is passionate and hasty is generally honest. It is your old, dissembling hypocrite of whom you should beware. There's no deception in a bull-dog; it is only the cur that sneaks up and bites you when your back is turned.

## DOMESTIC DEPARTMENT.

TO PREVENT RATS FROM DAMAGING LEATHER.—It is a singular fact that rats will not touch anything containing castor oil, or even only covered with it, and, therefore, to guard belting against the voracity of these animals, all we have to do is touch it at every place where belting is exposed to their attacks with a brush previously dipped in castor oil.

The antipathy of the rats against this useful oil is really strange. Probably their instinct teaches that it is injurious to them; but it is useful for men to know this, in order to guard substances against their voracious appetite.

HOW TO SELECT FLOUR.—The first point to be considered is the color. If it is white, with a yellowish or straw colored tint, buy it. If it is white, with a bluish cast, or with white specks in it, refuse it. Second, examine its adhesiveness; wet and knead a little between your fingers; if it works soft and sticky, it is poor. Third, throw a lump of dry flour against a dry surface; if it falls like powder it is bad. Fourth, squeeze some of the flour in your hand; if it retains the shape given by the pressure, that, too, is a good sign. Flour that will stand all these tests is safe to buy. These modes are given by old flour dealers, and they pertain to a matter that concerns everybody—the staff of life.

CURE FOR HEADACHE.—Make a mixture of two parts of ice and one part of salt, and apply it by means of a little purse of silk gauze with a rim of gutta percha to limited spots on the forehead, or other parts of the scalp where rheumatic headache is felt. The skin is subjected to the process from half to one-and-a-half minutes, and is rendered hard and white.

PREVENTION OF FIRES.—The following simple suggestion is worthy of observation: Add one ounce of alum to the last water used to rinse children's dresses, and they will be rendered uninflammable, or so slightly combustible that they would take fire very slowly, if at all, and would not flame.

SORE THROAT.—Take a glass of olive oil and half a glass spirits of turpentine, mix them together, and rub the throat externally, wearing flannel round it at the same time. It should be applied in the early stages of the disease to insure entire success. Sweet oil will answer equally well.

## SHAKER FANCY POTATOES

The Earliest, BEST QUALITY, and most productive Potato in America. Will yield ONE-THIRD MORE than any other. A No. 1 Early or Late yield from 4 to 6 hundred bushels per acre. Price, \$10 per barrel, \$5 per bushel. 4 lbs. by mail, \$1. Circular free. JOHN BORLAND & CO., Morrisville, Bucks Co., Pa.

## NANSEMOND SWEET POTATOES FOR SEED!



Price \$4 per bushel, \$10 per barrel of three bushels. Also, Plants in proper season. This variety is successfully grown at the North. Send for Circular of Directions, etc.

MURRAY & CO., Foster's Crossings,

mar31 Warren Co., Ohio.

## How to raise 100 bushels of CORN to the Acre,

Or a good crop on any soil; with Useful and Practical Hints to Every Farmer. By R. P. Prosser. Sent Free by mail for 25 cents, six copies for \$1. Address H. WATKIN, Publisher, 230 Walnut Street, Cincinnati, Ohio. Feb15 2t

## Wanted, 3 or 4 FARMERS,

Or other intelligent young men, IN EACH COUNTY IN THE WEST. To engage in a business paying from \$100 to \$150 per month, during the spring and summer. Address Zeigler, McCurdy & Co., 509 Olive St., Saint Louis, Mo. mar1-4t

## St. Louis Wholesale Market.

Corrected for COLMAN'S RURAL WORLD, by

## SHRYOCK &amp; ROWLAND,

Successors to W. P. & L. R. Shryock,

## COMMISSION MERCHANTS

COTTON & TOBACCO FACTORS,

And Agents for the sale of Manufactured Tobacco, 210 Levee and 216 Commercial St., St. Louis. Particular attention paid to the purchase of Plantation Supplies and General Merchandise.

February 26, 1867.

Cotton—26c to 27 1/2 lb.

Tobacco—Lugs, \$2.75 to 3.60 1/2 lb. 100 lbs.

Shipping leaf, \$6.50 to 12.00.

Manufacturing leaf, \$10.00 to 35.00.

Hemp—Hacked tow, \$145 1/2 ton.

Hemp, \$150 @ 160.

Lead—\$8.75 1/2 lb. 100 lbs.

Hides—Dry salt, 16c; Green do. 9 1/2 1/2 lb.

Dry flint, 19c 1/2 lb.

Hay—\$25.00 @ 27.00 1/2 ton.

Wheat—Spring, \$2.25 to 2.40, 1/2 bush.

Winter, \$2.75 to 3.00 1/2 bush.

Corn—83c to 90 1/2 bush.

Oats—70c to 73 1/2 bush.

Barley—Spring, 1.00. Fall, 1.80 to 1.90

Flour—Fine, \$8 to 8.50 1/2 bbl.

Superfine, \$9 to 10.00 1/2 bbl.

XX, \$12.00 to 14.00 1/2 bbl.

Ex. Family, \$15 to 16 1/2 bbl.

Butter—Cooking, 15c to 20; table, 31 to 38, 1/2 bbl.

Eggs—33c, 1/2 doz., shipper's count.

Beans—Navy, \$3.60 @ 3.80, 1/2 bus.

Castor, \$2.00 1/2 bus.

Potatoes—\$90 to \$1.10 1/2 bus.

Salt—per bbl. \$3.20. G. A., sack, 2.50 to 2.60

Onions—\$5.50 per bbl.

Dried Fruit—Apples, \$2.00 to 2.60 1/2 bus.

Peaches, \$3.50 to \$5 1/2 bus.

Cranberries—\$14.00 per bbl.

Corn Brooms—\$1.50 to 3.50 per doz.

Groceries—Coffee, Rio, 26 1/2 c to 29 1/2 lb.

Tea, \$1.25 to 2.00 1/2 lb.

Sugar, N. O., 13c to 13 1/2 1/2 lb.

Crushed & Refined, 16 1/2 c 1/2 lb.

Molasses, N.O., 75c 1/2 gal.

Choice Syrups, \$1.35 to 1.70, 1/2 gal.

Soap—Palm, 7 1/2 c 1/2 lb.

Ex. Family, 9 1/2 c 1/2 lb.

Castile, 14c 1/2 lb.

Candles—17c to 27 1/2 lb.

Lard Oil—\$1.10 @ 1.15 1/2 gal.

Coal Oil—50c 1/2 gal.

Tallow—9 1/2 c 1/2 lb.

Beeswax, 30c to 35 1/2 lb.

Green Apples—Choice Jenetons, \$5 @ 6.50, 1/2 bbl.

## PREMIUMS TO CLUB AGENTS.

To any person sending us the names of FOUR Subscribers and Six Dollars, we will send postage prepaid, Two Dozen PLANTS of the SAINT LOUIS RASPBERRY, or Two Dozen PLANTS of DOOLITTLE'S IMPROVED BLACK CAP RASPBERRY, or Six well rooted CONCORD GRAPE VINES.

To any person sending a Club of TEN and FIFTEEN DOLLARS, we will send free, THREE TIMES the number of any one of the above Premiums, or ALL THREE of the abovenamed Premiums, as the Agent may choose.

To any person sending us a Club of FIFTY Subscribers at Two Dollars each, we will deliver, suitably packed at any express office or other place in St. Louis, one of WILLCOX & GIBBS' splendid FAMILY SEWING MACHINES, worth \$58.

Or, for Seventy-five Subscribers, at our lowest club rates, viz., \$1.50 each, we offer the same Premium.

The WILLCOX & GIBBS' FAMILY SEWING MACHINE, is one of the most popular in the country; is very simple and strong, uses a straight needle, runs very light, and is warranted in all respects.

## ANOTHER SPLENDID PREMIUM.

We offer as an additional Premium, one of WHEELER & WILSON'S SEWING MACHINES, worth in St. Louis, SEVENTY-FIVE DOLLARS, with glass cloth presser, hemmer, braider and corder, all complete and warranted, to any person who will send us Seventy-five Subscribers at our lowest club rates, viz., \$1.50 each. Or the same premium to the getter up of a club of Fifty, at \$2 each. Here is a chance for every one to get a No. 1 Sewing Machine, at a cheaper rate than ever before offered. We are determined to offer such inducements that the *Rural World* shall circulate in the family of every reading farmer in the West.

If any agent fails to make up his club to the full size, he can send on such names as he can get, and the balance in money, and the Sewing Machine will be delivered to him or her. Here is a good chance for doing good and being well rewarded for it.

## PREMIUM IN TREES AND PLANTS.

There are many who wish to plant Fruit Trees and Small Fruits. To such we will say, that we will pack, and deliver at any Express or other office in St. Louis, the following special assortment of Fruit Trees and Small Fruits, upon their sending to us the names of Thirty Subscribers, at \$1.50 each. This assortment will fill the requirements of a small family.

25 apple trees, best early and late.

6 peach " " "

6 dwarf pear, " " "

6 grape vines, 3 varieties.

12 currants, 2 varieties.

12 gooseberries.

12 Lawton blackberries.

12 Doolittle raspberries.

12 St. Louis "

50 strawberries assorted.

It is not necessary that those who compose a club should receive their papers at the same Post-office.

Clubs can at any time be enlarged.

Single subscribers who remit \$2 for their subscriptions, can afterwards send the names of three more subscribers and four more dollars, and thus form a club of four for six dollars.

Be careful to give the name of the post-office for each subscriber.



## TENBROOK, PIERCE & CO., Sweet Potato Culturists,

Have on hand a large stock of NANSEMOND and BERMUDA SWEET POTATOES, for Seed, which we offer to those wanting seed the coming spring, at \$13 per bbl. of 3 bushels each. A reasonable discount on large orders and to seed dealers. Our facilities are such, that we can promptly forward ALL ORDERS with which we may be favored. For further particulars, address, TENBROOK, PIERCE & CO. Rockville, Ind., or South Pass, Union Co., Ill. J15flm1&15

### NATIVE WINES.

Norton's Virginia, Concord, Herkimer, Delaware, Cunningham, Cassady, Clinton, Hartford Prolific and Catawba, by the case, containing 1 dozen bottles each. Norton's Virginia, Concord and Catawba, also by the keg, barrel or cask.

As these wines were all grown on my own vineyards, and carefully managed, I can warrant them to be of superior quality and to give general satisfaction.

Sample cases, containing one dozen bottles assort-  
ed of all the above varieties, will be put up if desired.  
Address, GEO. HUSMANN, Hermann, Mo.

## CLINTON GRAPES. LINNÆUS RHUBARB.

### CHERRIES, 1 year old.

### SEEDLINGS, Roses, &c.

The attention of the trade is especially invited to our

Heavy stock of the above,  
As well as to our regular assortment of  
FRUIT AND ORNAMENTAL TREES,  
SHRUBS, VINES, &c. &c.

Our facilities for shipment to the West are unex-  
celled. Wholesale and Retail Catalogues furnished  
on application to

Hoopes, Bro., & Thomas,  
Cherry Hill Nurseries,  
Feb 4th WEST CHESTER, PA.

## TO NURSERYMEN. Fruit and Flower Plates.

These Plates are all drawn from nature, lithographed by JOSEPH PRESTELE, Sen., and colored by JOSEPH PRESTELE, Jun., from Germany, and are superior to anything of the kind made in Europe.

Samples of  
FOUR SPECIMENS sent by mail  
to any address, post paid, on receipt of

ONE DOLLAR.

All orders to the amount of

ONE HUNDRED PLATES,

Paid in advance, \$25,

CAN BE SENT BY MAIL.

P.S.—My Plates took the First Premium at the last Iowa State Fair. Send for a Catalogue.

JOSEPH PRESTELE, Jun., Iowa City, Iowa.  
Feb 15-4t

## DAHLIAS. DAHLIAS.

My Descriptive Catalogue of upwards of Two Hundred of the choicest varieties, is now ready, and will be mailed gratis to all applicants. The trade supplied by the hundred or thousand at low rates.

HENRY MICHEL,

With Wm. Koenig & Co., 207 North Second St.  
Feb 15-3t St. Louis, Mo.

### Flower Seeds by Mail.

10 varieties choice Annuals,	\$0.50
25 " " selected,	1.00
50 " choice Annuals and Biennials, selected,	2.50
100 " choice Annuals, Biennials & Perennials,	5.00

Either of the above packages will be sent free to any address in the United States, on receipt of the price.

HENRY MICHEL.

With Wm. Koenig & Co., 207 North 2d St.,  
Feb. 15-4t St. Louis, Mo.

## BLOOMINGTON NURSERY.

275 ACRES—16th Year—General Assortment.

OSAGE ORANGE Hedge Plants—Strong, selected, packed in good order, 10,000 \$25.

APPLE, PEAR, CHERRY—All sizes; beautiful, cheap yearlings, for distant markets.

APPLE ROOT GRAFTS—Ready for planting, 10,000 \$120.

KITATINNY and WILSON'S EARLY Blackberries.

GRAPES—Iona, Ives, Isabella, Norton's, Concord, Clinton, Hartford, Rogers' Hybrids, &c.

SEEDS—Peach, Pear, Osage Orange.

EVERGREENS, SHADE TREES—Immense stock, all sizes.

ALTHEAS—Double named, strong, 100 \$12.

ROSES, DAHLIAS—Extra large, fine assortment.

GREENHOUSE and BEDDING PLANTS—8 large houses full.

Send Red Stamp each for 3 Catalogues.

Feb 15-3t F. K. PHOENIX, Bloomington, Ill.

PREMIUM CHESTER COUNTY WHITE PIGS—Constantly on hand a well select-

ed stock of the purest Breed Chester County Whites. Having paid particular attention to the breeding of these pigs, will guarantee all stock to be of the purest and finest quality. These pigs make more weight for the feed consumed than any other breed, frequently weighing from 5 to 7 hundred pounds from 16 to 18 months old. For sale by GEO. B. HICKMAN, West Chester, Chester Co., Pa. N.B.—Pigs shipped by Express to all parts of the United States at reasonable prices.

Decl—6m

## 10,000 Norton's Virginia!

Grown from Layers, extra strong.

Also,

## CONCORD, CLINTON,

## HARTFORD PROLIFIC, &c.

At low rates, by the hundred or thousand. Send for Price List. Address, HENRY MICHEL,  
Jan 6t 207 North 2d St., St. Louis, Mo.

## For Sale, 100,000 Raspberry

Plants of the Miami Blackcap variety, suitable for spring planting. For price, &c., address, W. S. COMBS, at Collinsville, Ills.

Feb 15-2t

## 1,000,000 GRAPE VINE CUTTINGS

### FOR SALE.

Norton's Virginia, \$12 for 1000 cuttings; by 10,000 or more, only \$10.

Concord and other sorts cheaper.

DR. H. SCHRODER,  
Feb 6t Bloomington, Ill.

## Yellow Nansemond and Early

Bermuda Sweet Potatoes, \$5 per bushel; \$12 per barrel; St. Louis Red, \$4 per bushel; \$8 per barrel.

Feb 15-4t E. A. RIEHL, Alton, Ill.

## HOSPITAL PIGS.

Choice specimens of this well known breed of swine, six months old, now ready for shipment. Price on cars, \$25. No inferior animals sold. Address, E. P. JONES, Hospital Farm Steward, Jacksonville, Ill.

## Willcox & Gibbs' Sewing Machine.

"Its seam is stronger and less liable to rip in use or wear than the Lock Stitch."

("Judges' Report" at the "Grand Trial.")

Send for the "Report" and samples of Work, containing both kinds of stitches on the same piece of goods. Address,

## M. W. LEET,

General Agent, No. 11 North Fifth St.,  
Saint Louis, Mo. opposite Court House

## PRICE LIST OF WINES,

Grown by

GEORGE HUSMANN, GRAPE HILL VINE-  
YARDS, NEAR HERMANN, MO.

In cases of one dozen bottles each—

Norton's Virginia, first quality,	\$18.00
Concord, first quality,	12.00
Concord, second quality, very good,	10.00
Herkimer, first quality,	18.00
Delaware, first quality,	24.00
Cunningham, first quality,	18.00
Cassady, first quality,	12.00
Clinton,	10.00
Hartford Prolific,	16.00
Catawba, first quality,	10.00
Catawba, second quality, very fair,	\$ 8.50

In cases, in quantities under forty gallons—

Norton's Virginia, first quality,	\$4.50
Concord, first quality,	3.00
Concord, second quality,	2.50
Catawba, first quality,	2.50
Catawba, second quality,	2.00
Herkimer, first quality,	4.50

In quantities over forty gallons—

Norton's Virginia, first quality,	4.00
Concord, first quality,	2.50
Concord, second quality,	2.00
Catawba, first quality,	2.00
Catawba, second quality,	1.75

As these wines were all grown on my own vineyards and carefully managed, I can warrant them to be of superior quality, and have no doubt but they will give general satisfaction.

GEO. HUSMANN.

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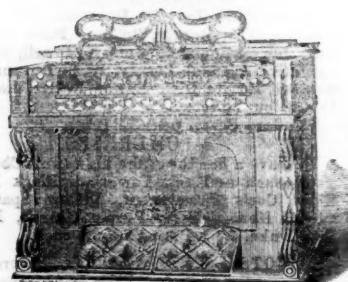
The oldest establishment in the United States.

Manufactory, corner of Niagara and Maryland Sts., BUFFALO, N.Y.

Over 40,000 Now in Use.

## GEO. A. PRINCE & CO.'S

## Melodeons and Automatic Organs.



WITH "MANUAL SUB-BASS" AND "TREMOLO" CAN BE FOUND IN ALL THE PRINCIPAL MUSIC STORES

Throughout the United States, Canada and the British Provinces. No other musical instrument ever obtained the same popularity.

We now manufacture over FORTY DIFFERENT STYLES of the MELODEON, ORGAN MELODEON, SCHOOL ORGAN, AUTOMATIC ORGAN, &c., and during the existence of our Manufactory have sent for A GREATER NUMBER OF INSTRUMENTS than the whole of the other Manufactories in the United States combined! And we have the proud satisfaction of adding, WE HAVE NEVER HAD AN INSTRUMENT RETURNED from any imperfection or deficiency in construction.

Our NEW ILLUSTRATED CATALOGUE, just issued, is sent free of postage to any applicant. Address orders or communications to

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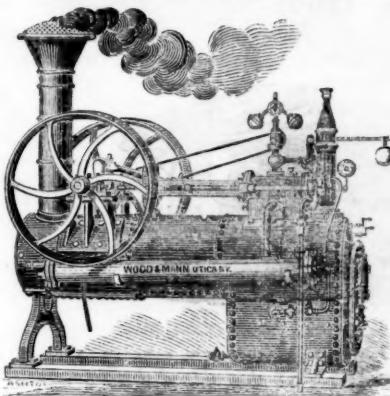
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## NURSERY FOR SALE.

The remaining stock and good will of the Hermann Nursery, one of the oldest and most reliable in the State. For further particulars, address

GEO. HUSMANN, Hermann, Mo.

WOOD & MANN STEAM ENGINE  
CO.'S CELEBRATED  
PORTABLE AND STATIONARY  
Steam Engines & Boilers.



From 4 to 35 horse power.  
Also, PORTABLE SAW MILLS

We have the oldest, largest and most complete works in the United States, devoted exclusively to the manufacture of Portable Engines and Saw Mills, which, for simplicity, compactness, power and economy of fuel, are conceded by experts to be superior to any ever offered to the public.

The great amount of Boiler room, fire surface, and cylinder area, which we give to the rated horse power, make our Engines the most powerful and cheapest in use; and they are adapted to every purpose where power is required. All sizes constantly on hand, or furnished on short notice.

Descriptive Circulars with Price List, sent on application.

WOOD & MANN STEAM ENGINE CO.,  
Utica, N. Y.

Branch Office, 96 Maiden Lane, N. Y. City.  
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DR. JACKSON'S  
BALSAM OF LUNGWORT.

The great remedy for Coughs, Colds, Sore Throat, Hoarseness, Spitting of Blood, Soreness of the

CHEST AND LUNGS,  
AND  
Consumption.

This old tried medicine stands higher in reputation than all others; its effects are prompt and certain, and it has cured more bad cases than all other medicines put together. Don't fail to give it a trial, and be convinced, as delays are dangerous.

Price One Dollar a bottle.

COLLINS BROTHERS,  
ST. LOUIS, MO.

SOLE PROPRIETORS.

**ITCH! ITCH!!**

SALT      DR. JACKSON'S  
RHEUMI      ITCH      OINTMENT.      SALT  
RHEUMI      RHEUMI

Will cure the ITCH or SALT RHEUM.

In a few applications. It also cures prairie Scratches, Chilblains, Ulcers and all Eruptions of the skin where other remedies have been tried in vain, cures speedily and thoroughly. Price 50 cents a box. Sold by all druggists. By sending 60 cents in a letter to COLLINS BROTHERS, S. W. cor. 2d & Vine streets, St. Louis, Mo., it will be sent by mail free of postage.

April 15-1y.

AND VALLEY FARMER.

The Lamb Family

KNITTING  
Machine!  
K nits H osiery  
OF ALL SIZES,

Forming the HEEL and  
TOE complete,

Also, FANCY FABRICS of every variety. In fact every article of Knit Fabric in use in the family, can be manufactured on the Machine.

For Circular and SAMPLE STOCKING, address with stamp, CLARK & LEET, Nov. 15 No. 11 North 5th St., Saint Louis, Mo.

J. M. Jordan's Nursery.

Concord Vines, No 1, \$15 per 100, \$120 per 1000.  
" " 2, \$10 " \$75 "  
Clinton " 1, \$10 "  
Taylor or Bullitt Vines, \$7.50 per 100.  
Apple Trees, \$20 per 100.  
Peach " \$25 "  
Cherry " \$40 "  
Dwf. Pear Trees, \$35 per 100.  
Stand. Pear, \$40 per 100.  
Victoria and Linnaea Rhubarb, \$10 per 100.  
Osage Orange, large plants, \$5 per 1000; small plants, \$3.  
Asparagus, Blue Top Giant, strong roots, \$7.50 per 1000.

Send for a Catalogue, or come and see the stock at the Nursery, on Grand Avenue, north of Cass Ave., St. Louis, Mo.

J. M. JORDAN

**GRAPES!**

Grapes, Grapes, Grapes.  
300,000 Concord, 100,000 Catawba  
From vines never mildewed or rotted.  
20,000 Hartford, 10,000 Delaware;  
Norton's Virginia, Diana, Clinton  
And all other good sorts of Grape Vines.

Currant, Raspberry, Strawberry  
and other plants, cheaper than anywhere else  
for sale. Send stamp for Catalogue and Essays  
on Grape Culture, to DR. H. SCHRODER,  
Feb 6th Bloomington, Ill.

2,000 Norton's Virginia Vines,  
2d class.

Early Goodrich Potatoes, a few  
barrels. feb 15-4t A. RIEHL, Alto, Ill

**SMALL FRUIT BOXES.**  
By the 1000, or 10,000  
or 100,000!!!

I have been appointed SOLE AGENT for the State  
of Missouri, for the sale of  
Hallock's Patent Quart Fruit

Boxes, with Cases for holding the same—  
furnished complete, in any quantity.

This is the best and cheapest Small Fruit Box yet  
patented, and can be furnished so cheap that it may  
go with the fruit, and if not returned the loss will  
not be felt.

Those having STRAWBERRIES, RASPBERRIES or BLACKBERRIES to market, will do well  
to correspond with the undersigned.

NORMAN J. COLMAN, St. Louis.

Early Metcalf Strawberry, said  
to be 10 days earlier than the Wilson, very produc-  
tive and firm, sent by mail, at \$1 per dozen; \$5 per  
100. feb 15-4t E. A. RIEHL, Alton, Ill.

**PLANT & BRO.,**

ST. LOUIS

Agricultural Warehouse  
AND  
SEED STORE,

(Established 1845, by Wm. M. Plant.)

Sign of the Gilt Plow.

116 & 118 South Main St.,

Between Walnut and Elm:

Also, No. 820 NORTH FOURTH STREET  
(Fronting on two streets), & 823 BROADWAY.

Keep the Largest and Best Assortment of

**PLOWS, HARROWS,**

Corn and Seed Planters and Drills,  
Cultivators,

**REAPERS, MOWERS,**

Horse Rakes,

**Horse Powers,**

Threshers, Farm Wagons,

Portable Farm Engines,

SAW MILLS,

Leather & Rubber Belting,

Hose, Rubber and Hemp Packing,

Lace Leather,

HOOKS, RIVETS, AND PICKS.

**Portable Farm Grist Mills,**

PUMPS,

Corn Shellers, Cider Mills,

WHEELBARROWS,

Straw, Hay & Corn Stalk Cutters,

CHURNS, STORE TRUCKS,

Washing Machines,

Clothes Wringers,

Spades, Shovels, Forks, Hoes, &c.

**GARDEN, GRASS,  
AND OTHER SEEDS,**

Cotton Gins, Jennys and Wool

Carding Machines,

McGAFFEY'S COTTON SEED PLANTER

**Sorgo Mills & Evaporators.**

Send for Circulars and Prices.

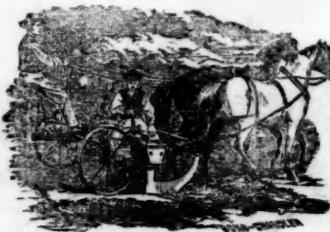
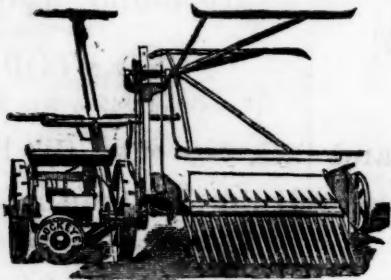
**PLANT & BRO.**

St. Louis, Mo.

## WESTERN AGRICULTURAL DEPOT AND SEED STORE.

WM. KOENIG &amp; CO.,

No. 207, (Old No. 56) North Second St., St. Louis, Mo.



We are just in receipt of a large supply of

## LANDRETH'S GARDEN SEEDS,

Now ready for delivery. We are prepared to fill all orders for these celebrated Seeds that we may be favored with; we can assure our patrons that the seeds purchased of us are fresh and true to name. We draw the attention of Farmers to

## BROWN'S IMPROVED ILLINOIS CORN PLANTER. DEERE'S CELEBRATED MOLINE PLOWS.

The Favorite Hawkeye Sulky Corn Cultivator.

## The World Renowned BUCKEYE Reaper And Mower, which took the

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